

# **Construction Notice West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project**



PUCO Case No. 25-0484-EL-BNR

Submitted to:  
The Ohio Power Siting Board  
Pursuant to Ohio Administrative Code Section  
4906-6-05

Submitted by:  
AEP Ohio Transmission Company, Inc.

June 20, 2025



# Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

## Construction Notice

AEP Ohio Transmission Company, Inc.  
West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

4906-6-05

AEP Ohio Transmission Company, Inc. (the "Company") provides the following information in accordance with the requirements of Ohio Administrative Code Section 4906-6-05.

### 4906-6-5(B) General Information

#### B(1) Project Description

The name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Construction Notice (CN).

The Company proposes to construct the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project (the "Project") located in Fairfield County, Ohio. The Project involves adjusting 0.1 mile of the West Lancaster – South Baltimore 138kV Transmission Line (approved in Case No. 24-0689-EL-BLN), changing two structure types from single, steel monopoles to H-frame structures. The adjustment is required due to structure height conflicts with South Central's future upgrade plans of their 69kV line that crosses under the West Lancaster – South Baltimore 138kV line. The Project will remain within the acquired, existing 100 foot right-of-way ("ROW"). Figures 1 and 2, included in Appendix A, show the location of the Project in relation to the surrounding vicinity.

The Project meets the requirements for a CN because it is within the types of projects defined by item 1(a) of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

*(2) Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure, for a distance of:*

*(a) Two miles or less.*

The Project has been assigned PUCO Case No. 25-0484-EL-BNR.

#### B(2) Statement of Need

If the proposed project is an electric power transmission line or gas or natural gas transmission line, a statement explaining the need for the proposed facility.

The Company has identified the need to rebuild the West Lancaster – South Baltimore and a segment of the South Baltimore – North Newark 138 kV Transmission Lines. The conductor was installed in the 1950's and has not been replaced since the lines were originally put in-service. The majority of the structures are wood structures between 25 and 70 years old and make up approximately 72% of structures along the lines. Some structures have been replaced over time with steel, due to their age and condition. Today, there are a significant number of open structural conditions reported on the 14.4 mile project segment affecting the poles and other structural components. These conditions include damage to structures, insect and woodpecker damage, along with rot conditions on structures. There are 51 unique structures with at least one open structural condition reported, which correlates to 49% of the structures along the Project. Further, there are several spans of conductor and shield wire with broken strands.



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Considering the age and condition of the transmission lines, the Company has identified the need to rebuild the assets using modern materials and current engineering and construction standards. The Project will also support continued customer expansion in the Lancaster area.

Failure to address asset renewal needs will increase the risk for reliability issues due to the age and conditions of the current facilities.

The need and solution for this Project were presented to PJM on February 15, 2024, and March 15, 2024, respectively, see Appendix B. The project was subsequently assigned a PJM number S3308. The Project was not included in the Company's 2024 Long Term Forecast Report (LTFR) because the solution was not known at the time of filing.

### B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the Project area.

The Project is located in Fairfield County, Ohio. Figure 1 in Appendix A shows the location of the Project in relation to the existing utility infrastructure in the area.

### B(4) Alternatives Considered

The applicant shall describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

The Company conducted an analysis that included initial investigations of engineering alternatives for the avoidance of conflicts with South Central's future upgrade plans of their 69kV line. Based on ROW constraints between the adjacent roadway and residential property appurtenances, the location of the structure could not be moved back or forth in line, such that the conflict would be resolved. Options for changing the height and/or type of structure was then analyzed. In order to build the structures higher, the height would affect multiple structures in a line and would be greater visibility and wider structure bases, which would affect the adjacent residences. It was then decided to lower the structures and change the structure type to maintain appropriate tensions on the line. No other alternatives were identified for the Project.

Following the initial analysis, it was decided that reducing the height of the structures and changing the structure type was the most feasible option which resulted in resolution of the conflict with South Central's project and had the least impact on adjacent property owners. All options had similar minimal impact on environmental and cultural resources in the area and confirmed that reducing structure height and changing the structure type is the most feasible option. Any other alternative would add impact to residences without any additional benefit.

Collectively, the Project represents the most suitable location, structure height, and structure type and is the most appropriate solution for meeting the Project needs.

### B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.



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The Company maintains a website (AEPOhio.com/LancasterMillersport) on which an electronic copy of this CN is available. An electronic copy of the CN will be served to the public library in each political subdivision affected by this Project. The Company also retains land agents who will discuss project timelines, construction and restoration activities with affected owners and tenants.

### B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to begin in December 2024, and the anticipated in-service date will be August 2026.

### B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Figure 1 in Appendix A provides the proposed Project area and existing transmission facilities on a map of 1:24,000-scale (1-inch equals 2,000 feet), showing the Project on a United States Geological Survey (USGS) 7.5-minute topographic map of the Baltimore and Carroll quadrangles. Figure 2 in Appendix A shows the Project area on ESRI World Imagery, dated 2021, as provided by the Environmental Systems Research Institute (ESRI), at a scale of 1:6,000 (1-inch equals 500 feet).

To visit the Project site from Columbus, Ohio, take I-70 East to US-33 E toward Lancaster for approximately 22 miles. Use the right lane to take the ramp at exit 145 toward Lancaster Business Route, then continue for 0.7 miles on Columbus-Lancaster Rd NW. Turn left onto Coonpath Td NW and continue for approximately 2.8 miles to the Project site. The approximate address of the two structures is 1610 Coonpath Rd NW, Lancaster OH 43130, at latitude 39.769329, longitude -82.629160.

### B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

A list of properties required for the Project are provided in Table 1, below.

Table 1 – Property Agreements

Property Agreements for West Lancaster – South Baltimore – West Millersport 138 kV Rebuild Project Construction Notice		
Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
0130036610	Easement	No
0130086900	Easement	No
0130058000	Easement	No
0130087000	Easement	No

The form easements in Appendix C represents the easement rights the Company would seek if condemnation proceedings were necessary to construct, operate, and maintain these facilities.



# Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

## B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The West Lancaster – South Baltimore 138 kV structure replacements are anticipated to include the following:

Voltage: 138kV  
Conductors: 1033.5 kcmil 54/7 Curlew/ACSS  
Static Wire: 144ct OPGW 0.646" Diameter and 7#8 Alumoweld  
Insulators: NCI  
ROW Width: 100 Feet  
Structure Type: Two (2) Single circuit, H-Frame steel tangent structures with direct embedded foundations

## B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

Three loading conditions were examined: (1) Normal Maximum Loading, (2) Emergency Loading, and (3) Winter Normal Conductor Rating, consistent with the OPSB requirements. Normal Maximum Loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this circuit of this line would operate at its WN rating in the foreseeable future.

EMF levels were computed one meter above ground under the line and at the ROW edges (50/50 feet, left/right, of centerline). The results, calculated using BPA's CAFEP software, are summarized below.

Table 1: EMF Calculations for the West Lancaster-South Baltimore-West Millersport 138 kV Rebuild Project

West Millersport – South Baltimore					
Condition	Load (A)	Phasing Arrangements	Ground Clearance (ft)	Electric Field (kV/m)*	Magnetic Field (mG)*
(1) Normal Max. Loading <sup>^</sup>	379	A-B-C	32.4	(0.27/1.16/0.25)	(10/32/12)
(2) Emergency Line Loading <sup>^^</sup>	502	A-B-C	32.3	(0.27/1.17/0.25)	(13/43/17)
(3) Winter Conductor Rating <sup>^^^</sup>	2381	A-B-C	25.8	(0.30/1.68/0.26)	(67/310/90)
South Baltimore – West Lancaster					



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Condition	Load (A)	Phasing Arrangements	Ground Clearance (ft)	Electric Field (kV/m)*	Magnetic Field (mG)*
(1) Normal Max. Loading <sup>^</sup>	343	A-B-C	29.3	(0.27/1.37/0.24)	(9/35/12)
(2) Emergency Line Loading <sup>^^</sup>	466	A-B-C	29.2	(0.27/1.38/0.24)	(12/48/16)
(3) Winter Conductor Rating <sup>^^^</sup>	2381	A-B-C	24.3	(0.29/1.85/0.25)	(68/343/92)

\*EMF levels (left ROW edge/maximum/right ROW edge) computed one meter above ground at the point of minimum ground clearance, assuming balanced phase currents and 1.0 P.U. Voltages. ROW width is 50 feet (left) and 50 feet (right) of centerline, respectively.

<sup>^</sup>Peak line flow expected with all system facilities in service.

<sup>^^</sup>Maximum flow during a critical system contingency

<sup>^^^</sup>Maximum continuous flow that the line, including its terminal equipment, can withstand during winter conditions.

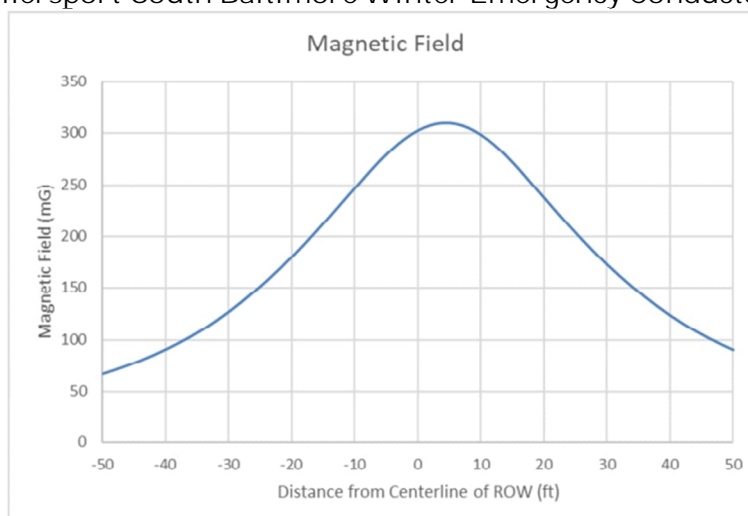
For power-frequency EMF, IEEE Standard C95.1™-2019 provides the following exposure reference level (ERL) limits:

	General Public	Controlled Environment
Electric Field Limit (kV/m)	5.0	20.0
Magnetic Field Limit (mG)	9040	27,100

The above EMF levels are well within the limits specified in IEEE Standard C95.1™-2019. Those limits have been established to "protect against established adverse health effects in humans associated with exposure to electric, magnetic, and electromagnetic fields in the frequency range of 0 Hz to 300 GHz."

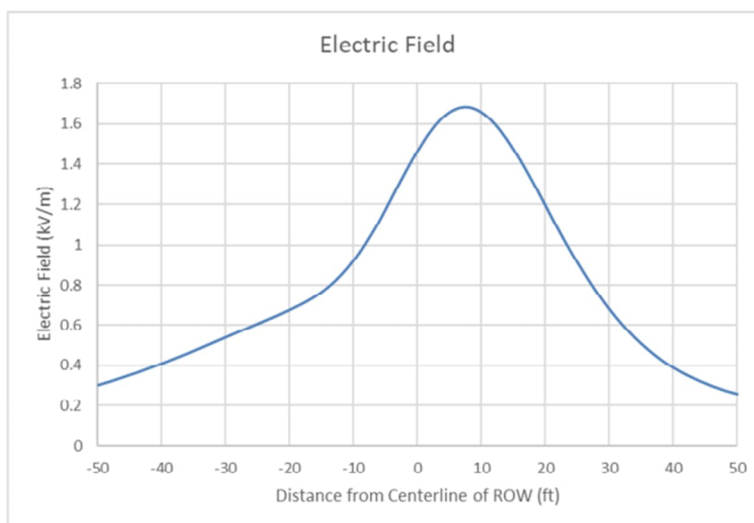
The following plots show the magnetic fields and electric fields across the ROW under winter emergency conductor rating (worst case):

West Millersport-South Baltimore Winter Emergency Conductor Rating:

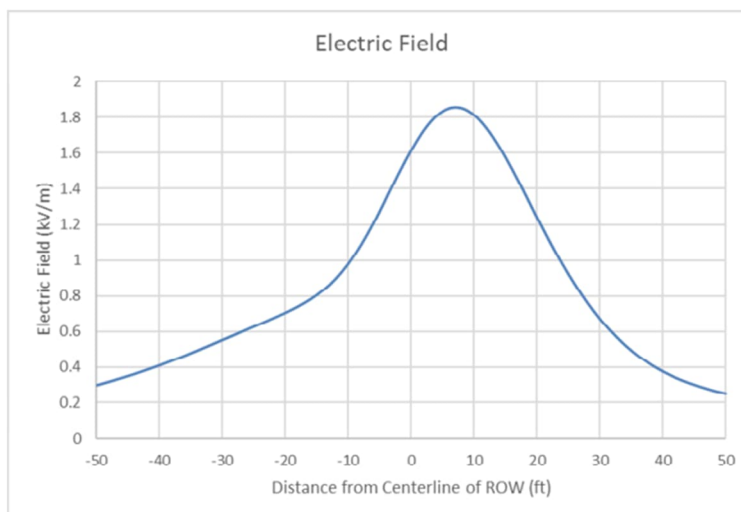
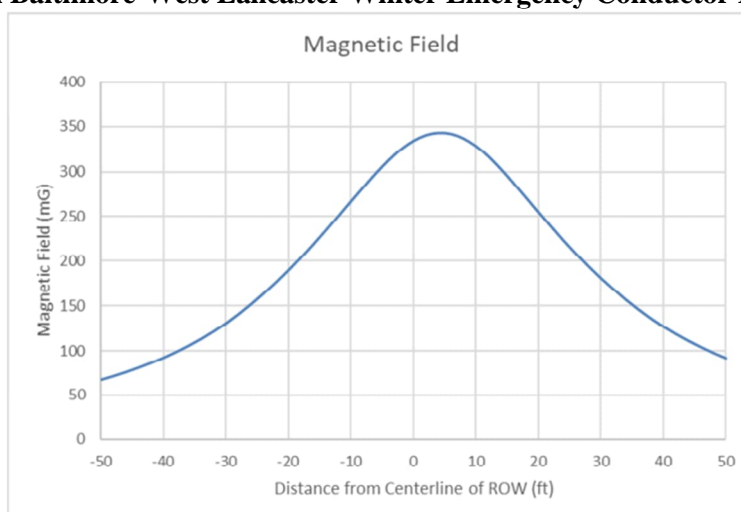




Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project



**South Baltimore-West Lancaster Winter Emergency Conductor Rating:**





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### B(9)(c) Project Cost

The estimated capital cost of the project.

The cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$60,444,415 based on a Class 4 estimate. Pursuant to the PJM Open Access Transmission Tariff ("OATT"), the costs for this Project will be recovered in the AEP Ohio Transmission Company, Inc.'s Federal Energy Regulatory Commission ("FERC") formula rate (Attachment H-14 to the PJM OATT) and allocated to the AEP Zone.

### B(10) Social and Ecological Impacts

The applicant shall describe the social and ecological impacts of the project:

#### B(10)(a) Land Use Characteristics

Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

An aerial photograph of the Project vicinity is provided as Figure 2. The majority of the Project has historically been residential in nature, with the Project area proceeding through residential lawns and adjacent to houses. A portion of the project is also within an area surrounded by woodlands. the Project area within Fairfield County. A portion of the Project also proceeds through a heavily urbanized portion within the City of Lancaster, consisting of residential and commercial properties. There are no parks, churches, cemeteries, wildlife management areas, or nature preserve lands within 100 feet of the Project.

#### B(10)(b) Agricultural Land Information

Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.

The Fairfield County Auditor provided a list of parcels registered as Agricultural District Land on May 19, 2025. The Agricultural District Land parcel lists are updated each calendar year. There were no parcels within the Project ROW identified as agricultural district lands. No agricultural district land or agricultural land is located within the proposed ROW of the Project.

#### B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archaeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

A Phase I Archaeological Investigation and a History/Architecture Investigation for the Project occurred in April and May 2024. Thirty-two (32) archaeological sites and 84 architectural resources of 50 years of age or older were identified within the Area of Potential Effect (APE).

On May 11, 2024, a response from the Ohio State Historic Preservation Office ("SHPO") was received. The SHPO concurred with the recommendations of eligibility and stated that, of the identified sites, one archeological site (33FA0419) was recommended for avoidance or additional investigation and two architectural sites (FAI0090105 and FAI0090210) were recommended as being eligible for listing in the National Register of Historic Places (NRHP).

On June 22, 2024 a response was received from the SHPO regarding an addendum to the West Lancaster-South Baltimore section of the Project. Three OAI sites (33FA0180, 33FA0419, and 33FA1720) were



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identified as within the project area. No further coordination is recommended for site #33FA0180, while additional investigation is recommended for site #33FA1720. At the time of submission, Phase II assessment work for OAI site 33FA0419 was actively underway and the entirety of this expanded work area will be addressed through those investigations. Likewise, per the submission, OAI site 33FA1720 is located within this expanded work area and will be addressed concurrently with the Phase II investigations for site 33FA0419. Finally, two new OAI sites were identified and neither site was recommended eligible for listing on the NRHP.

The Company has begun Phase II investigations at site 33FA0419 and 33FA1720, and has submitted an avoidance plan to SHPO for sites 33FA2873 and 33FA2898. A response from the SHPO regarding the submitted avoidance plan is still pending. All other sites are avoided with the current draft access plan. Current correspondence with SHPO is provided as Appendix C. Additional coordination correspondence will be provided as received.

The Phase II investigations are not within the vicinity of the two structures that are the focus of this Construction Notice.

### B(10)(d) Local, State, and Federal Agency Correspondence

Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), a Notice of Intent was filed with the Ohio Environmental Protection Agency for authorization of construction stormwater discharges under General Permit OHC000006. The Company also coordinated stormwater permitting needs with local government agencies, as necessary. The Company will implement and maintain best management practices as outlined in the Project-specific Stormwater Pollution Prevention Plan to minimize erosion and control sediment to protect surface water quality during storm events. No further stormwater permits are necessary as part of the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project.

The Company's consultant conducted a stream and wetland delineation as part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN). During the survey, no wetlands or streams were identified within the portion of the project related to this filing and no stream or wetland permitting is anticipated.

The Project is not located within the FEMA 100-year floodway.

There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed Project.

### B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), coordination letters were sent to United States Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) Ohio Natural Heritage Program (ONHP) and Division of Wildlife (DOW) on March 25, 2024, seeking an environmental review for potential impacts to threatened



## Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

and endangered species. Response letters were received on April 17, 2024, and April 26, 2024 by the USFWS and ODNR, respectively.

According to the response letters received from the USFWS dated April 17, 2024 and ODNR dated April 26, 2024, four bat species, northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalist*), little brown bat (*Myotis lucifugus*), and tricolored bat (*Perimyotis subflavus*) were identified as being within range of the Project area and ODNR/USFWS request adherence to seasonal tree clearing activities (October 1 to March 31). Based on general observations during the ecological survey, the existing land use is primarily urban or agricultural row crop. Forested clearing is not anticipated; any tree clearing needed for the 138kv will be completed between October 1 to March 31 unless agency (ODNR/USFWS) permission is obtained. Additionally, the Company's consultant completed a desktop review for potential hibernaculum within 0.25 miles of the Project area and no caves, mines, and/or karst features were identified. As per ODNR/USFWS current guidance, further coordination regarding potential hibernaculum is only necessary if the habitat assessment find potential habitat within 0.25 miles of the Project area. Therefore, no further coordination was necessary with either the ODNR and/or USFWS regarding these species. Results of the desktop habitat assessment has been included within Appendix C.

The ODNR identified one mussel species, Kidneyshell (*Ptychobranhus fasciolaris*), within 1 mile of the West Lancaster – South Baltimore 138kV Transmission Line Project area. However, due to the absence of in-stream work within the Project area, no impacts are anticipated to this species and further coordination with the ODNR is not warranted.

The ODNR also identified a Great Blue Heron Rookery within 1 mile of the West Lancaster – South Baltimore 138kV Transmission Line Project area. This species is not recorded within the Project area. Based on existing site conditions, potential nesting habitat for the Great Blue Heron was *not* identified due to the existing land use being urban areas, residential lawns, and actively farmed agricultural areas. Therefore, no further coordination regarding the rookery was warranted as no habitat was present.

The ODNR also identified two aquatic fish species, the northern brook lamprey (*Ichthyomyzon fossor*) and the popeye shiner (*Notropis ariommus*), within range of the West Lancaster – South Baltimore 138kV Transmission Line Project area. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. Due to the absence of in-stream work within the Project area, no impacts are anticipated to this species and further coordination with the ODNR is not warranted.

Lastly, the ODNR commented that the Project is within range of one bird species, Northern harrier (*Circus hudsonius*). Based on existing site conditions, potential nesting habitat for the Northern Harrier was identified within the Project area. As per the ODNR initial guidance provided in Appendix D, this species is not likely to be impacted by the West Lancaster – South Baltimore 138kV Transmission Line Project if their habitat will not be impacted. Therefore, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31.

The West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project is also covered by these agency consultations, and no further consultation is required for this Project.

A copy of the agency correspondence is provided in Appendix D. Additional information regarding habitat assessments within the Project area is provided within the Wetland Delineation and Stream Assessment Report found in Appendix E.

### B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the



## Construction Notice for West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project

findings of the investigation, and a copy of any document produced as a result of the investigation.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), the Company's consultant prepared an ecological survey report for the entire line rebuild, which is provided in Appendix E. No wetlands or watercourses were identified within the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project area.

As part of the West Lancaster – South Baltimore 138kV Transmission Line Project (approved in Case No. 24-0689-EL-BLN), coordination letters were submitted to the USFWS and ODNR requesting a review the Project and identification of areas of ecological concern. The USFWS's response email was received on April 17, 2024, (Appendix D) and did not indicate any federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project. The ODNR's response received on April 24, 2024 (Appendix D) did not indicate any known unique ecological sites, geologic features, scenic rivers, state wildlife areas, state natural preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the Project area. No further coordination is necessary for the West Lancaster-South Baltimore 138 kV Transmission Line Adjustment Project.

### B(10)(g) Unusual Conditions

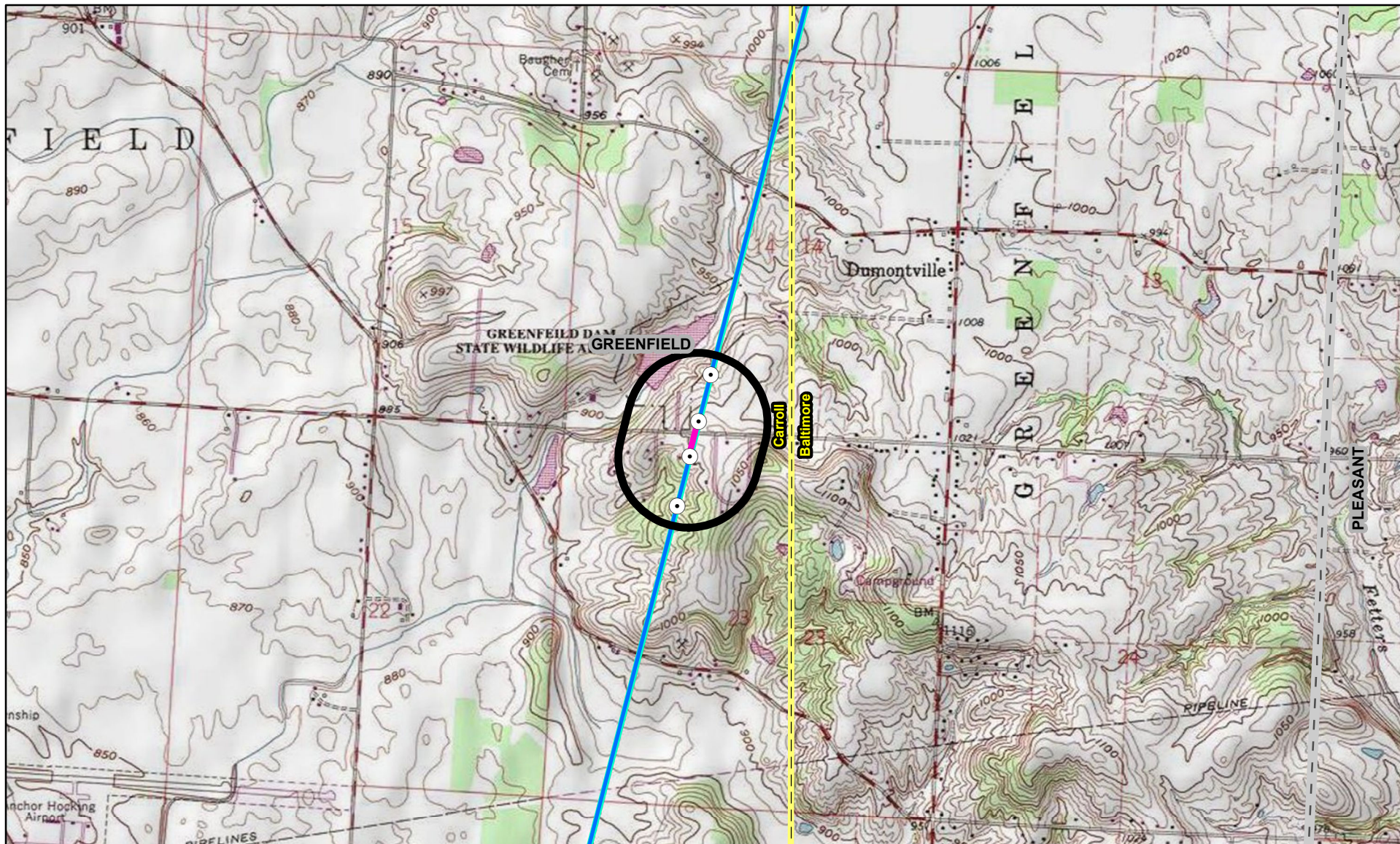
Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.



## Appendix A Project Figures





- Proposed Structure Locations
- Project Centerline Focus
- West Lancaster - South Baltimore - West Millersport
- Existing Transmission Lines
- ▭ Project Area (1000 Ft Buffer)
- ▭ Township Boundary
- ▭ US Topographic Lines

Data Sources: AEP, USGS 7.5'  
Topographic Quadrangles  
(Baltimore & Carroll)

Coordinate System  
and Datum:  
NAD 83 State Plane  
Ohio South, Feet

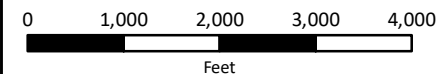
January 27, 2025



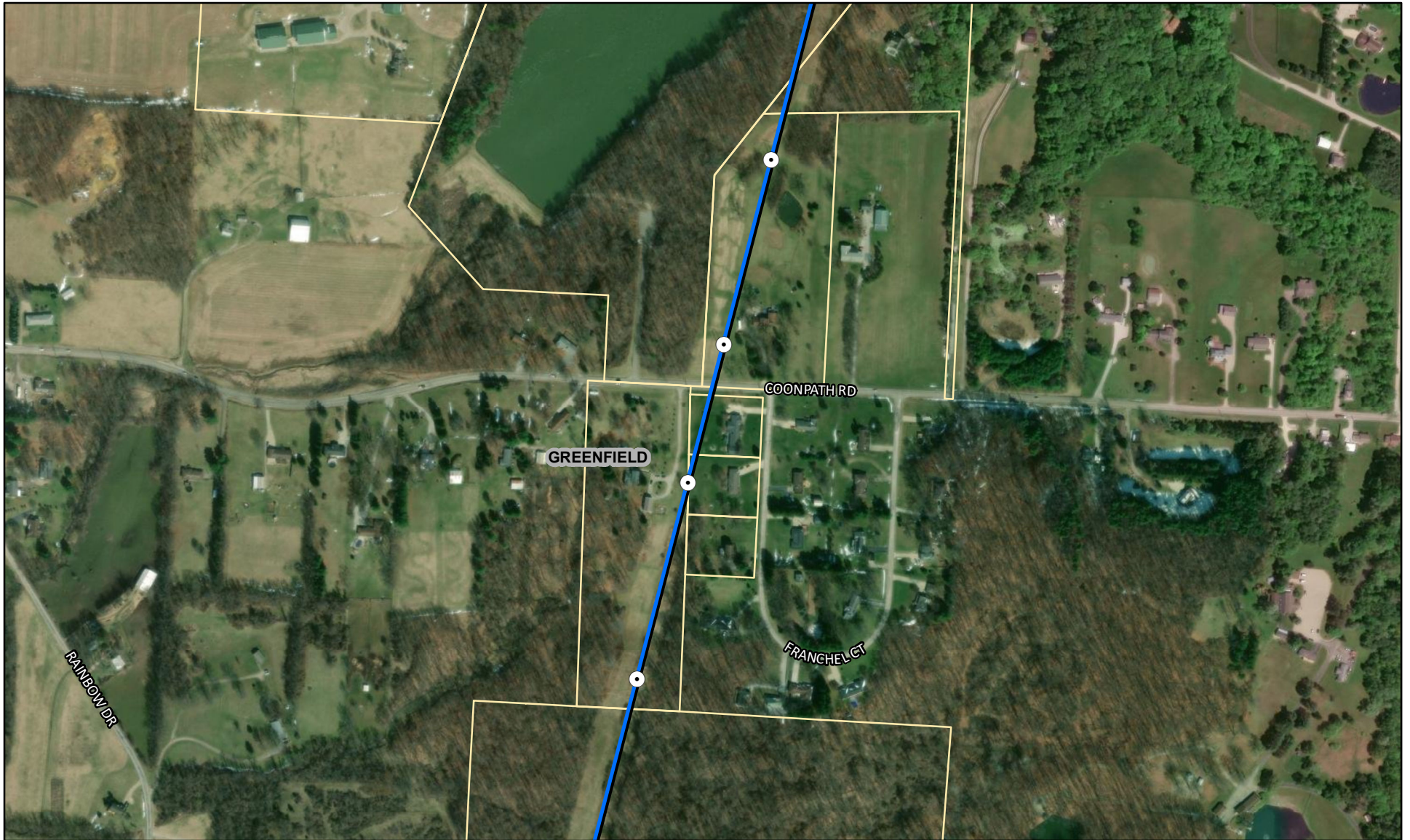
## FIGURE 1 - Extent TOPOGRAPHIC OVERVIEW



Construction Notice  
West Lancaster - South Baltimore  
- West Millersport Project







<ul style="list-style-type: none"> <li>○ Proposed Structure Locations</li> <li>— West Lancaster - South Baltimore - West Millersport</li> <li>— Existing Transmission Lines</li> <li>▭ Township Boundary</li> <li>▭ Project Parcel Boundary</li> </ul>	<p>Data Sources: AEP (2024), ESRI Imagery (2021)</p> <p>Coordinate System and Datum: NAD 83 State Plane Ohio South, Feet</p> <p>January 27, 2025</p>		<p><b>FIGURE 2 AERIAL MAP</b></p> <p><b>AEP OHIO</b> <small>An AEP Company</small></p> <p>Construction Notice West Lancaster – South Baltimore – West Millersport Project</p> <p>0 500 1,000 Feet</p>
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## Appendix B PJM Solution



**Need Number:** AEP-2024-OH029

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan May 20, 2024

**Previously Presented:**

Solutions Meeting 03/15/2024

Needs Meeting 02/16/2024

**Project Driver:** Equipment Material/Condition/Performance/Risk

**Specific Assumption Reference:**

AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 13)

**Problem Statement:**

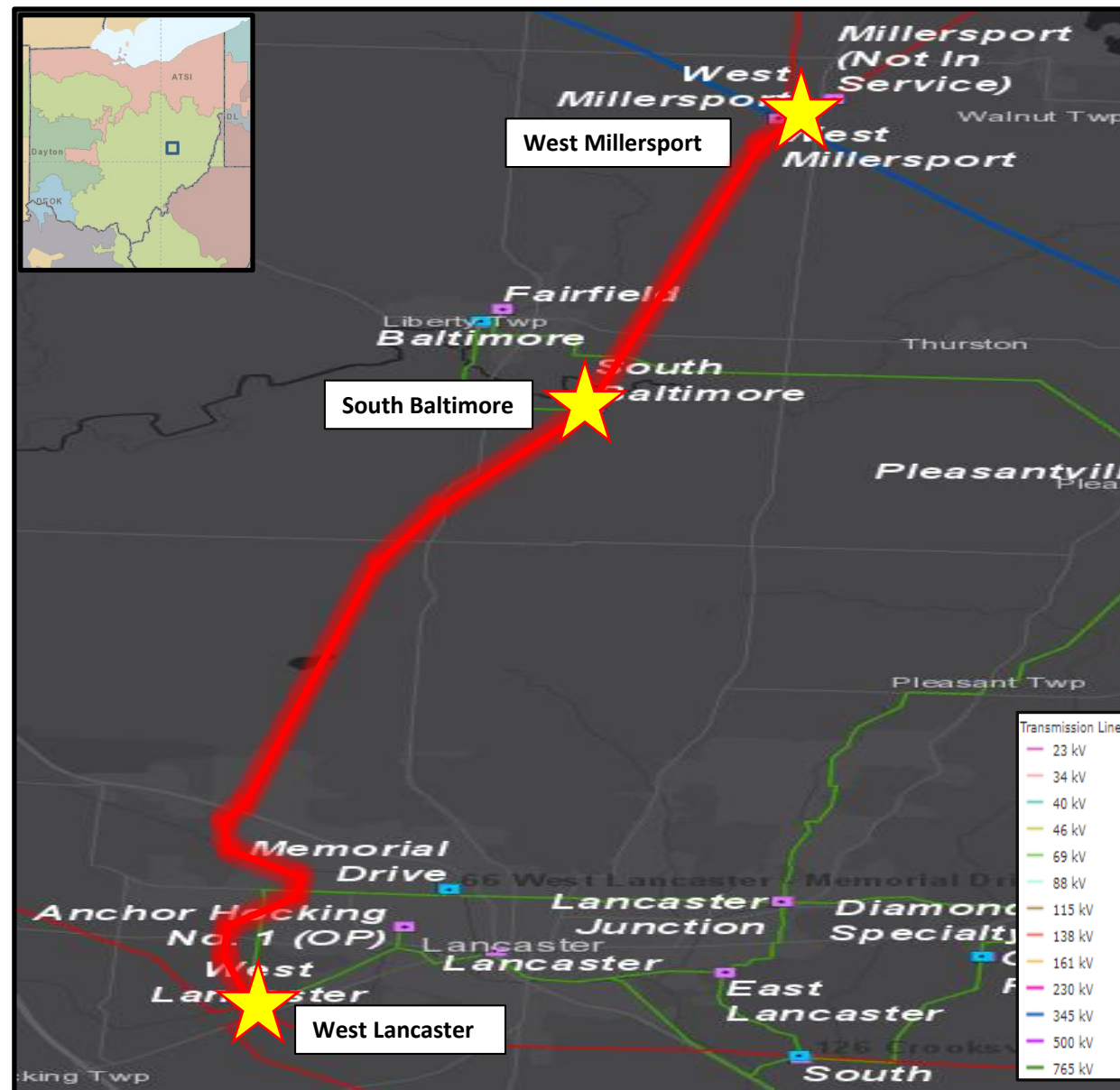
**Line Name:** West Lancaster - South Baltimore - West Millersport 138 kV Line

- Original Install Date (Age): 1954
- Length of Line: 14.4 miles
- Total structure count: 104 of Pole Wood & Pole Steel
  - Wood: 50 from 1950s, 7 from 1960s, 5 from 1970s, 10 from 1980s, and 3 from 1990s.
  - Steel: 29 from 2010s
- Conductor Type: 14.4 miles of 397,500 CM ACSR 30/7 (Lark) from 1954.

**Open Conditions:**

Currently, there are ~~90~~ **58** unique structures with at least one open condition, which relates to ~~86.5%~~ **55.7%** of the structures on the line. There are currently ~~102~~ **112** structures related open conditions including rot, woodpecker, damaged, cracked, loose, vines, split, disconnected, and insect damaged conditions. There are ~~2~~ **3** conductor related open conditions related to broken strands. There are currently 8 open conditions related to broken ground lead wires. There are also 17 hardware related open conditions including broken and missing molding, damaged guy wires, missing guy guards, and burnt and broken insulators.

## AEP Transmission Zone M-3 Process West Lancaster – West Millersport 138 kV





**Need Number:** AEP-2024-OH029

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan May 20, 2024

**Solution:**

- West Lancaster – South Baltimore – West Millersport 138 kV :** Rebuild ~14.4 miles of the line between West Lancaster and West Millersport stations using 1033 ACSS 54/7 conductor. **Estimated Cost: \$38.7M (s3308.1)**
- West Lancaster Station:** Replace existing bus and line risers at the station, upgrade line relays. **Estimated Cost: \$1.0M (s3308.2)**
- South Baltimore Station:** Replace existing bus and line risers at the station, upgrade line relays. While at the station some additional site concerns such as the existing fence will be addressed. **Estimated Cost: \$0.7M (s3308.3)**

**Total Estimated Cost: \$40.4M**

**Projected In-Service:** 10/31/2026

**Supplemental Project ID:** s3308.1-.3

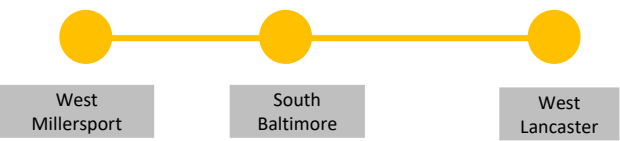
**Projected Status:** Scoping

**Model:** 2028 RTEP

# AEP Transmission Zone M-3 Process West Lancaster – West Millersport 138 kV

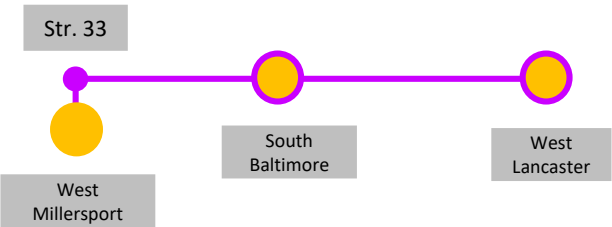
## Bubble Diagram

Existing:



Legend	
500 kV	<div></div>
345 kV	<div></div>
138 kV	<div></div>
69 kV	<div></div>
34.5 kV	<div></div>
23 kV	<div></div>
New	<div></div>

Proposed:





# WEST LANCASTER - WEST MILLERSPORT TRANSMISSION LINE REBUILD PROJECT

AEP Ohio representatives plan to strengthen the local transmission system in Fairfield County, addressing the growing power demand in the area and enhancing reliable electric service to area customers. Crews plan to begin construction late 2024 and conclude in fall 2026.

## WHAT

This project involves:

- Rebuilding approximately 15 miles of 138-kilovolt transmission line from southwest Lancaster to southwest Millersport.
- Replacing deteriorating wooden poles with single steel poles.
- Upgrading the West Lancaster and South Baltimore substations.

This project requires Ohio Power Siting Board (OPSB) approval.

## WHY

The project:

- Modernizes the transmission system originally built in the 1950s.
- Improves reliable electricity for area customers.
- Enhances the line's operational capacity to meet the growing area's power demand.

## WHERE

The project area includes:

- Fairfield County
- Hocking, Greenfield, Liberty and Walnut townships
- The cities of Lancaster, Baltimore and Millersport

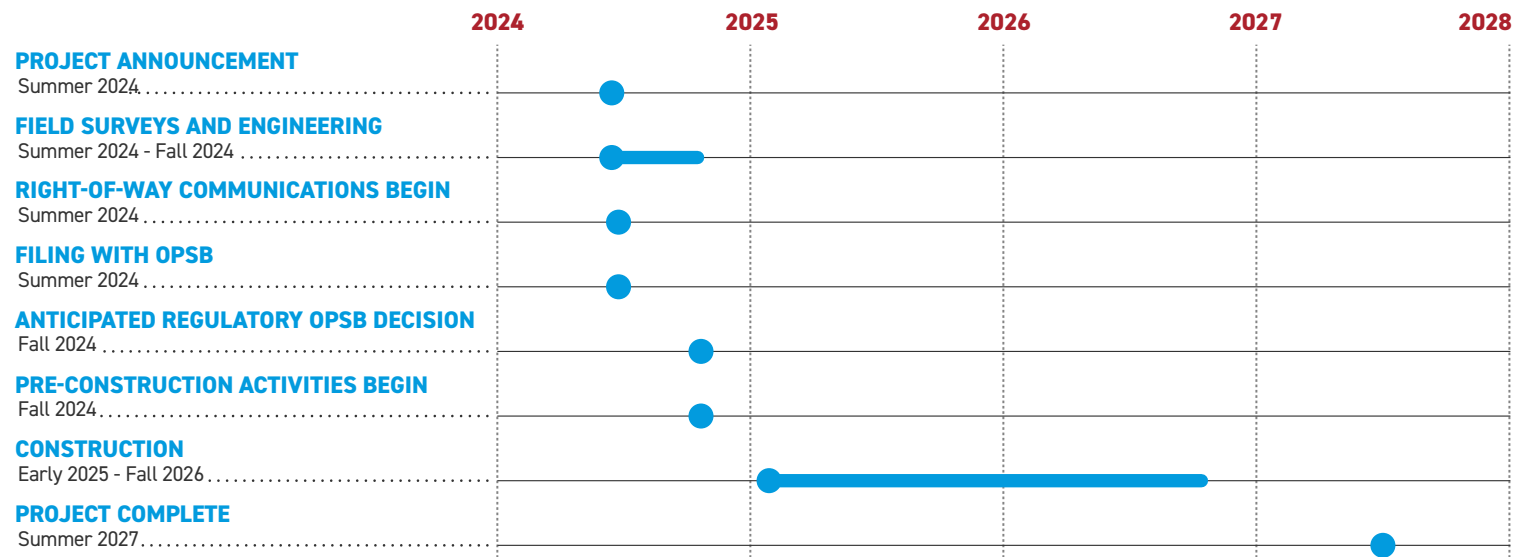
## BEFORE CONSTRUCTION

AEP Ohio right-of-way representatives plan to contact affected landowners regarding surveys, field work inside easements along the transmission line route and construction access.

Some pre-construction activities include:

- Trimming or removing woody-stemmed vegetation and removing or relocating non-habitable structures from the right-of-way.
- Installing temporary gates, fencing and access roads.

## PROJECT SCHEDULE



\*Timeline subject to change.



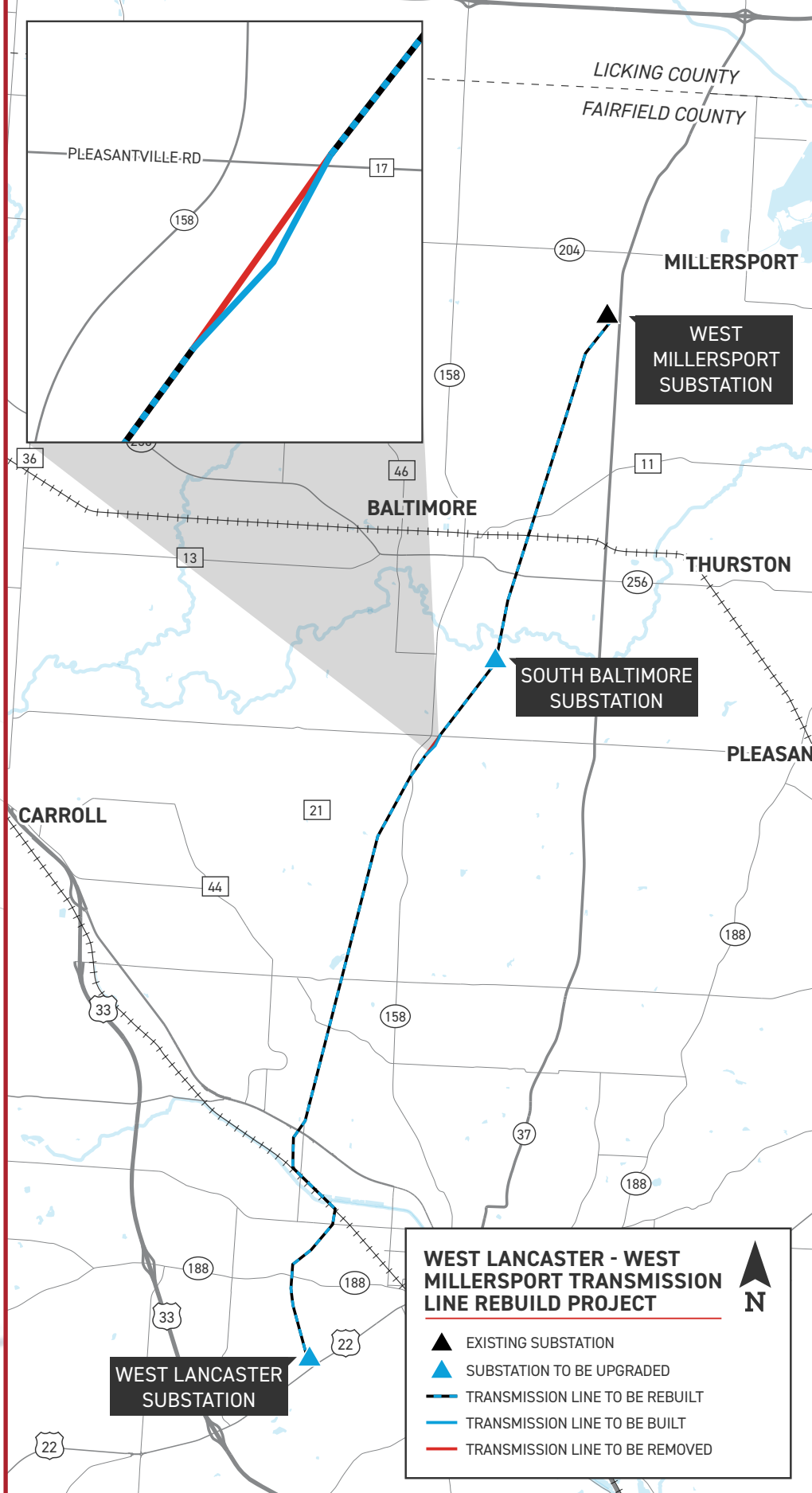
# TYPICAL STRUCTURES

This project involves the use of steel single pole structures.

Typical Pole Height:  
Approximately 85 feet\*

Typical Right-of-Way Width:  
Approximately 100 feet\*

\*Exact structure, height and right-of-way may vary.



WE VALUE YOUR INPUT. PLEASE SEND COMMENTS AND QUESTIONS TO:  
STEPHANIE EISENBERG • WSP REPRESENTING AEP OHIO  
OUTREACH@AEP OHIO TRANSMISSION.COM • 614-259-8201  
AEP OHIO.COM/LANCASTERMILLERSPORT





## Appendix C Property Agreements



**Line Name:** West Lancaster - South Baltimore

**Line No.:**

**Easement No.:**

### **SUPPLEMENTAL EASEMENT AND RIGHT OF WAY**

On this \_\_\_\_ day of \_\_\_\_\_, 2024, \_\_\_\_\_, whose address is \_\_\_\_\_, (“Grantor”), whether one or more persons, owns an interest in a tract of real property that is more particularly described lands of the Grantor, situated in the State of Ohio, Fairfield County, Greenfield Township, Tax Parcel Number \_\_\_\_\_, in that certain document, dated \_\_\_\_\_ recorded in Instrument Number \_\_\_\_\_, of the real property records of Fairfield County, Ohio, and such tract is subject to easements and rights-of-way granted in favor of AEP Ohio Transmission Company, Inc..

**Ohio Power Company**, a(n) Ohio corporation, a unit of American Electric Power, whose principal business address is 1 Riverside Plaza, Columbus, Ohio 43215, (“AEP”) is the current owner and holder of the rights, title, and interest, or a portion thereof, granted in or arising under that certain right of way and easement, dated \_\_\_\_\_, and recorded in Deed Volume \_\_\_\_\_, Page \_\_\_\_\_, of the official records of Fairfield County, Ohio (the “Original Easement”).

NOW, THEREFORE, in consideration of the sum of \_\_\_\_ and NO/100 Dollars (\$\_\_\_\_) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby grants, conveys and warrants this Supplemental Easement and Right of Way (“Easement”) to AEP for electric transmission, distribution, and communication lines and appurtenant equipment and fixtures, being, in, on, over, under, through and across to supplement the Original Easement insofar as it encumbers such tract of real property owned by Grantor as more particularly described above.

Auditor/Key/Tax Number: \_\_\_\_\_

The location, width, and boundaries of the easement area are hereby revised, modified, and clarified to be as described and depicted on Exhibit “A”, attached hereto and made a part hereof (“Easement Area”).

The Easement is also supplemented by the addition of the following language:



AEP, its successors and assigns, are granted the right to construct, reconstruct, operate, maintain, alter, inspect and patrol (by ground or air), protect, repair, replace, renew, upgrade, relocate within the Easement Area, remove and replace poles, towers, and structures, made of wood, metal, concrete or other materials, including crossarms, guys, anchors, anchoring systems, grounding systems, underground conduits, ducts, vaults, transformers, pedestals, risers, pads, communications facilities, and all other appurtenant equipment and fixtures, and to string conductors, wires and cables. The electric facilities may consist of a variable number of towers, poles, wires, guys, anchors and associated fixtures, including the right to enlarge, and may transmit electricity of any voltage or amperage, together with the right to add to said facilities from time to time, and the right to do anything necessary, useful or convenient for the enjoyment of the Easement Area herein granted, together with the privilege of removing at any time any or all of said facilities erected on the Easement Area.

AEP and its successors and assigns, shall have the right, in AEP's reasonable discretion, to cut down, trim, and otherwise control, using herbicides or tree growth regulators, or other means, and at AEP's option, to remove from the Easement Area any and all trees, overhanging branches, vegetation, brush, including all root systems or other obstructions. AEP shall also have the right to cut down, trim, remove, and otherwise control trees situated on lands of the Grantor which adjoin the Easement Area, when in the reasonable opinion of AEP those trees may endanger the safety of, or interfere with the construction, operation or maintenance of AEP's facilities or ingress or egress to, from or along the Easement Area.

AEP and its successors and assigns are granted the right of unobstructed ingress and egress, at any and all times, on, over, across, along and upon the Easement Area, and across the adjoining lands of Grantor as may be reasonably necessary to access the Easement Area for the above referenced purposes.

In no event shall Grantor, its heirs, successors, and assigns plant or cultivate any trees or place, construct, install, erect or permit any temporary or permanent building, structure, improvement or obstruction including but not limited to, storage tanks, billboards, signs, sheds, dumpsters, light poles, water impoundments, above ground irrigation systems, swimming pools or wells, or permit any alteration of the ground elevation, over or within the Easement Area. AEP may, at Grantor's cost, remove any structure or obstruction if placed within the Easement Area and may re-grade any alterations of the ground elevation within the Easement Area. AEP shall repair or pay Grantor for actual damages to growing crops, fences, gates, field tile, drainage ways, drives, or lawns caused by AEP in the exercise of the rights herein granted.

The failure of AEP to exercise any of the rights granted herein, including but not limited to the removal of any obstructions from the Easement Area, shall not be deemed to constitute a waiver of the rights granted herein and the removal of any facilities from the Easement Area shall not be deemed to constitute a permanent abandonment or release of the rights granted herein.

Except as modified by this Supplemental Easement and Right of Way, all terms and provisions of the Original Easement and all rights arising in connection with the Original Easement shall remain



in full force and effect, and the Original Easement shall keep its priority in title as of the date of its recording. Those provisions and rights are expressly ratified, reaffirmed by and incorporated within this Supplemental Easement and Right of Way. The Original Easement along with this Supplemental Easement and Right of Way shall for all purposes function as a single instrument, however, to the extent any terms or provisions of the Original Easement conflict with, limit or are inconsistent with any term or provision of the Supplemental Easement and Right of Way, the terms and provisions of this Supplemental Easement and Right of Way shall control. Nothing herein will in any manner vary, change, modify, or restrict the rights and privileges that AEP may have acquired through any instrument other than the Original Easement or by any other means.

The terms and conditions as supplemented by this instrument, are the complete agreement, expressed or implied between the parties hereto and shall inure to the benefit of and be binding on their respective successors, assigns, heirs, executors, administrators, lessees, tenants, licensees, and legal representatives.

This instrument may be executed in counterparts, each of which will be deemed an original, but all of which taken together will constitute one and the same instrument.

**Any remaining space on this page intentionally left blank. See next page(s) for signature(s).**



**IN WITNESS WHEREOF**, the Grantor has executed this Easement effective the day, month and year first above written.

**GRANTOR**

\_\_\_\_\_  
By:  
Title:

State of §

County of §

This instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_, 2023, by Karen L. Osborn, Trustee of the Steiger Family Trust.

\_\_\_\_\_  
Notary Public  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_

This instrument prepared by Thomas G. St. Pierre, Associate General Counsel - Real Estate, American Electric Power Service Corporation, 1 Riverside Plaza, Columbus, OH 43215 for and on behalf of Ohio Power Company, a unit of American Electric Power.

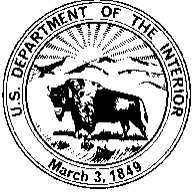
When recorded return to: American Electric Power - Transmission Right of Way, 8600 Smiths Mill Road, New Albany, OH 43054.



## Appendix D Agency Coordination



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994



April 17, 2024

Project Code: 2024-0064491

Dear Olivia Speckman:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees  $\geq 3$  inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees  $\geq 3$  inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees  $\geq 3$  inches dbh cannot be avoided, we recommend removal of any trees  $\geq 3$  inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.



Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio ([https://epa.ohio.gov/portals/47/facts/ohio\\_wetlands.pdf](https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf)). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at [mike.pettegrew@dnr.ohio.gov](mailto:mike.pettegrew@dnr.ohio.gov).



If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Erin Knoll".

Erin Knoll  
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW  
Eileen Wyza, ODNR-DOW





# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

## Office of Real Estate

*Tara Paciorek, Chief*

2045 Morse Road – Bldg. E-2

Columbus, Ohio 43229

Phone: (614) 265-6661

Fax: (614) 267-4764

April 26, 2024

Olivia Speckman  
V3 Companies  
619 North Pennsylvania Street  
Indianapolis, Indiana 46204

**Re:** 24-0500\_West Lancaster - South Baltimore - West Millersport 138kV Rebuild

**Project:** The proposed project involves rebuilding approximately 14.4 miles of the West Lancaster – South Baltimore – West Millersport 138 kV Transmission Lines.

**Location:** The proposed project is located in Liberty, Walnut, Greenfield, and Pleasant townships, Fairfield County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has the following data within one mile of the project area:

Cerulean Warbler (*Setophaga cerulea*), SC  
Kidneyshell (*Ptychobranchnus fasciolaris*), SC  
Great Blue Heron Rookery  
Appalachian oak forest plant community  
Oak-maple forest plant community

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. Records for high quality plant communities indicate the presence of sites that are in our inventory of the best remaining examples of Ohio's pre-settlement ecosystems.

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.



The species and features listed above are not recorded within the boundaries of the specified project area. However, please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at [Eileen.Wyza@dnr.ohio.gov](mailto:Eileen.Wyza@dnr.ohio.gov)).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH  $\geq 20$  if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#).” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2022), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional



malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the [Ohio Mussel Survey Protocol](#). If there is no in-water work proposed, impacts to mussels are not likely.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, and the popeye shiner (*Notropis ariommus*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the northern harrier (*Circus hudsonius*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

**Water Resources:** The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at [mike.pettegrew@dnr.ohio.gov](mailto:mike.pettegrew@dnr.ohio.gov) if you have questions about these comments or need additional information.

Mike Pettegrew  
Environmental Services Administrator





In reply, refer to  
2024-FAI-60977

May 11, 2024

Mr. Ryan J. Weller  
Weller & Associates, Inc.  
1395 West Fifth Avenue  
Columbus, Ohio 43212

**RE: West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project, Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County, Ohio**

Dear Mr. Weller:

This letter is in response to the correspondence received April 12, 2024, regarding the proposed West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project, Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 15.8 km (9.8 mi) West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project in Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2024). This project is related to a rebuild of the West Lancaster-South Baltimore 138kV transmission line located in the north and central part of Fairfield County, Ohio. The northern terminus is at the South Baltimore Station and the southern terminus is at the West Lancaster Station.

A literature review, visual inspection, surface collection, shovel probing, and shovel test unit excavations were completed as part of the investigations. Portions of the project area had been the subject of previous investigations. Sixteen (16) previously identified archaeological sites, Ohio Archaeological Inventory (OAI) sites #33FA0031, 33FA0100, 33FA0101, 33FA0177, 33FA0178, 33FA0180, 33FA0181, 33FA0419, 33FA1705, 33FA1706, 33FA1906, 33FA1918, 33FA1919, 33FA1930, 33FA2271, and 33FA2272, are located within or immediately adjacent the project area. These investigations reidentified seven (7) of the previously identified archaeological sites, OAI sites #33FA0180, 33FA0181, 33FA0419, 33FA1906, 33FA1918, 33FA1919, and 33FA2271; however, they did not relocate nine (9) previously recorded sites (#33FA0031, 33FA0100, 33FA0101, 33FA0177, 33FA0178, 33FA1705, 33FA1706, 33FA1930, and 33FA2272). These investigations also documented twenty-two (22) previously unrecorded archaeological sites, OAI sites #33FA2850-33FA2871. Of the twenty-nine (29) archaeological sites documented or reidentified during this survey, twenty-eight (28) archaeological sites (OAI sites #33FA0180, 33FA0181, 33FA1906, 33FA1918, 33FA1919, 33FA2271, and 33FA2850-33FA2871) were recommended not eligible for listing in the National Register of Historic Places (NRHP). No additional archaeological survey is recommended for these sites. OAI #33FA0419 was recommended for avoidance or additional investigations. Our office agrees with these recommendations.



2024-FAI-60977

May 11, 2024

Page 2

The following comments pertain to the *History/Architecture Investigations for the 15.8 km (9.8 mi) Long West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project in Walnut, Liberty, Greenfield, and Hocking Townships, Fairfield County Ohio* by Scott McIntosh (Weller & Associates, Inc., 2024).

A literature review and field survey for architectural resources were conducted as part of the investigations. A total of eighty-four (84) resources fifty (50) years of age or older were identified in the Area of Potential Effects (APE) for indirect effects. Of these, two (2) Ohio Historic Inventory (OHI) resources are recommended by Weller as eligible for listing in the NRHP under Criterion C (FAI0090105 and FAI0090210). None of the other architectural resources are identified as eligible. Our office agrees with Weller's recommendations of eligibility; therefore, we agree that there will be no adverse effect on aboveground historic resources as a result of the project.

To summarize, our office recommends avoidance or additional investigations for OAI site #33FA0419. In addition, we request that the inventory forms for OAI sites #33FA2862, 33FA2863, and 33FA2868 be completed and our office notified once the forms have been submitted. We look forward to additional coordination for the West Lancaster-South Baltimore-West Millersport 138kV Rebuild Project. If you have any questions, please contact me by e-mail at [cgullett@ohiohistory.org](mailto:cgullett@ohiohistory.org) or Ms. Joy Williams at [jwilliams@ohiohistory.org](mailto:jwilliams@ohiohistory.org). Thank you for your cooperation.

Sincerely,



Catherine Gullett, Project Reviews Coordinator  
Resource Protection and Review  
State Historic Preservation Office

RPR Serial No: 1102689 and 1102690





In reply, refer to  
2024-FAI-60977

June 22, 2024

Mr. Ryan J. Weller  
Weller & Associates, Inc.  
1395 West Fifth Avenue  
Columbus, Ohio 43212

**RE: Addendum 1 – West Lancaster-South Baltimore 138kV Rebuild Project, Fairfield County, Ohio**

Dear Mr. Weller:

This letter is in response to the correspondence received May 29, 2024, regarding the proposed West Lancaster-South Baltimore 138kV Rebuild Project, Fairfield County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum: Archaeological Investigations for Access Roads and Expanded Work Areas Associated with the West Lancaster-South Baltimore 138kV Rebuild Project in Fairfield County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2024). The purpose of this project is to address proposed access roads and expanded works areas associated with the West Lancaster-South Baltimore 138kV transmission line rebuild project that were not investigated during the initial Phase I archaeology and architecture surveys (Weller 2024; McIntosh 2024). This addendum project strictly addresses potential impacts to archaeological resources, as architectural resources within the Area of Potential Effects (APE) were addressed through the initial survey (McIntosh 2024).

A literature review, visual inspection, surface collection, and shovel test unit excavations were completed as part of the addendum investigations. Portions of the project area had been the subject of previous investigations through the initial Phase I survey (Weller 2024). There were three (3) previously documented archaeological sites, Ohio Archaeological Inventory (OAI) sites 33FA0180, 33FA0419, and 33FA1720, located within the addendum project area. OAI site 33FA0180 was documented in relation to a landowner's collection and does not have well-defined boundaries. These investigations did not relocate OAI site 33FA0180 within the addendum project area and no further archaeological survey is recommended in relation to this site.

A previous coordination letter issued for the West Lancaster-South Baltimore 138kV Rebuild Project



(dated May 11, 2024) recommended avoidance or additional investigations for OAI site 33FA0419. The known boundaries of OAI site 33FA0419 are located entirely within one of the proposed expanded work areas, which is roughly bounded by Ety Road NW to the east, the Hocking River to the southwest, and a railroad to the northeast. Per the submission, Phase II assessment work for OAI site 33FA0419 is actively underway and the entirety of this expanded work area will be addressed through those investigations. Likewise, per the submission, OAI site 33FA1720 is located within this expanded work area and will be addressed concurrently with the Phase II investigations for site 33FA0419. Our office requests the opportunity to review and comment on the plan for investigations within this expanded work area, as it relates to OAI site 33FA1720 and the Phase II assessment of OAI site 33FA0419.

Finally, these investigations identified two (2) new OAI sites: 33FA2906 and 33FA2907. Both archaeological sites are precontact-era isolated find spots that lacked any diagnostic materials. Neither site was recommended eligible for listing on the National Register of Historic Places (NRHP) and our office agrees with this recommendation. No additional archaeological survey is recommended within the tested portions of the addendum project area.

In summary, our office agrees that no additional archaeological investigation is needed for OAI sites 33FA0180, 33FA2906, and 33FA2907; however, we continue to recommend avoidance or additional investigations for OAI site 33FA0419. We also recommend that the entirety of the expanded work area, which contains a portion of OAI site 33FA1720, as well as OAI site 33FA0419, be investigated. Our office looks forward to additional coordination regarding these two archaeological sites and the West Lancaster-South Baltimore 138kV Rebuild Project. If you have any questions, please contact me by e-mail at [cgullett@ohiohistory.org](mailto:cgullett@ohiohistory.org). Thank you for your cooperation.

Sincerely,



Catherine Gullett, Project Reviews Coordinator - Archaeology  
Resource Protection and Review  
State Historic Preservation Office

RPR Serial No: 1103377



## Appendix E Ecological Resources Inventory Report



**WEST LANCASTER – SOUTH  
BALTIMORE – WEST MILLERSPORT  
138kV REBUILD  
ECOLOGICAL REPORT**



**PROJECT SITE:**

**Southwest of OH-204 and OH-37 to  
Northeast of US Highway 22 and OH-57  
Fairfield County, Ohio**

**PREPARED FOR:**

AEP Ohio Transmission Company, Inc.  
8600 Smiths Mill Road  
New Albany, Ohio 43054



*An AEP Company*

*BOUNDLESS ENERGY<sup>SM</sup>*

**PREPARED BY:**

V3 Companies, Ltd.  
619 North Pennsylvania Street  
Indianapolis, Indiana 46204  
(317) 423-0690

April 2024



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## EXECUTIVE SUMMARY

V3 Companies, Ltd. (V3), performed an ecological survey and report for The West Lancaster – South Baltimore – West Millersport 138kv Transmission Line Rebuild project on March 27 and 28, 2024. The project begins at West Millersport Station, southwest of OH-204 and OH-37, Millersport, OH, and extends approximately 4.6 mile southwest to South Baltimore Station (Structures 33 to 2) and continues approximately 9.8 miles southwest to West Lancaster Station, northeast of US Highway 22 and OH-57 (Structures 71 to 1) in Fairfield County, Ohio (SITE). The survey area includes the 14.4-mile-long transmission line and a 100-foot right of way corridor. V3 reached the following conclusions based on review of available and reasonably ascertainable federal, state, and local resources, and a SITE inspection conducted on the date referenced above.

- Seventeen streams were identified on-SITE, ST-31PER, ST-25-PER, ST-15-PER, Walnut Creek, ST-2-PER, ST-68-INT, ST-63-EPH, ST-55-INT, ST-53-INT, ST-48-EPH, ST-44-INT, ST-44-EPH, ST-42-INT, Hocking River, ST-14-PER, ST-11-INT and Hunters Run. All streams, except ST-63-EPH and ST-48-EPH, appear to be relatively permanent waters that will likely qualify as federally jurisdictional “Waters of the U.S.”. Additionally, Hocking River is designated by the U.S. Army Corps of Engineers (USACE) as a Section 10 Navigable Waterway 79 miles upstream of the confluence of the Ohio River.
- Eight wetlands were identified on-SITE, WL-12-PEM, WL-10-PEM, WL-5-PEM, WL-68-PEM, WL-60-PEM, WL-50-PEM, and WL-41-PEM. Wetlands WL-68-PEM, WL-41-PEM and WL-18-PEM appear to have a connection to relatively permanent waters, therefore, will likely qualify as a “Waters of the U.S.”. All the other wetlands did not appear to have direct connection to relatively permanent waters and are likely to be considered isolated.
- Two stormwater ponds were identified on-SITE. One potential stormwater pond was noted within an inaccessible residential area. The ponds appear to be isolated man-made features.
- An official species list obtained from the U.S. Fish and Wildlife Service (USFWS) Information Planning and Consultation (IPaC) website indicated that the SITE is within the ranges of the federally endangered Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), the proposed endangered tricolored bat (*Perimyotis subflavus*), the federally threatened eastern massasauga (*Sistrurus catenatus*) and round hickorynut (*Obovaria subrotunda*), the proposed endangered salamander Mussel (*Simpsonaias ambigua*) and the candidate for listing monarch butterfly (*Danaus plexippus*). The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 1 October to 31 March. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.
- Correspondence with the Ohio Department of Natural Resources (ODNR) indicated records of the state species of special concern cerulean warbler (*Setophaga cerulea*) and kidneyshell (*Ptychobranhus fasciolaris*), a Great Blue Heron rookery, Appalachian oak forest plant community, and oak-maple forest plant community within a one-mile radius of the SITE. Potentially suitable habitat for the kidneyshell was observed within the SITE. The documented plant communities are anticipated to occur within forested areas adjacent to the SITE. The ODNR Division of Fish and Wildlife stated that the SITE is also within the range of seven endangered, threaten, and rare (ETR) species. The ODNR stated that the project is not likely to impact these species if habitat is not impacted and gave recommendations to avoid and minimize impacts to these species and their habitats.





## CHAPTER 1 INTRODUCTION

This report has been prepared solely in accordance with an agreement between American Electric Power (“CLIENT”) and V3 Companies (“V3”), Ltd.

The services performed by V3 have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practices relating to this type of engagement.

This report is solely for the use of CLIENT and was prepared based upon an understanding of CLIENT’s specific objective(s) and based upon information obtained by V3 in furtherance of CLIENT’s specific objective(s). Any reliance of this report by third parties shall be at such third party’s sole risk as this report may not contain, or be based upon, sufficient information for purposes of other parties, for their objectives, or for other uses. This report shall only be presented in full and may not be used to support any other objectives than those for CLIENT as set out in the report, except where written approval and consent are expressly provided by CLIENT and V3.

### 1.1 INTRODUCTION

The purpose of this investigation was to conduct an ecological survey and report of the SITE to evaluate potential land development permitting requirements regarding natural resources. In this report, V3 provides a detailed description of the information reviewed and collected as part of the scope of work for this project. V3 summarizes the jurisdictional framework applicable to this project, provides a desktop review of relevant and publicly available documents, and details information collected during the SITE reconnaissance including a wetlands determination, an evaluation of the potential presence of other natural resources within the SITE boundary, and a discussion of endangered, threatened, and rare (ETR) species and habitat. The Conclusions section summarizes V3’s findings, addresses potential areas of concern and permitting, regulatory, and other relevant issues.





## CHAPTER 2 JURISDICTIONAL RESOURCES

### 2.1 WETLANDS

Wetlands offer a variety of functions and values that may include, but are not limited to, groundwater recharge/discharge, flood flow alteration, sediment/toxicant retention, and fish and wildlife habitat. Because of the perceived functions and values of wetlands, USACE developed the Wetlands Delineation Manual, (*1987 Manual*)<sup>1</sup> to identify wetlands.

Wetlands are defined in the *1987 Manual* as, “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”<sup>2</sup> The *1987 Manual* outlines the protocol for distinguishing wetland areas from “upland” areas. Wetland areas are delineated according to three primary criteria: vegetation, soil, and hydrology. An area is determined to qualify as a wetland if it meets the following “general diagnostic environmental characteristics:”

- Hydrophytic vegetation
- Hydrology
- Hydric Soil

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<sup>1</sup> USACE. Waterways Experiment Station. Wetlands Research Program. “Corps of Engineers Wetlands Delineation Manual.” Vicksburg, MS: Environmental Laboratory, 1987





## CHAPTER 3 DESKTOP REVIEW

V3 reviewed applicable, readily available, and accessible historical information for the potential presence of wetlands, “Waters of the U.S.,” and other natural resources.

### 3.1 UNITED STATES GEOLOGICAL SURVEY 7.5-MINUTE QUADRANGLE MAP

A USGS 7.5-Minute Quadrangle map displays contour lines to portray the shape and elevation of the land surface. Quadrangle maps render the three-dimensional changes in elevation of the terrain on a two-dimensional surface. The maps usually portray both manmade and natural topographic features. Although they show lakes, rivers, various surface water drainage trends, vegetation, etc., they typically do not provide the level of detail needed for accurate evaluation of wetlands. However, the existence of these features may suggest the potential presence of wetlands.

The SITE is situated in the Millersport, Baltimore, Carroll, and Amanda, Ohio USGS 7.5-Minute Quadrangle Map. Section, Township and Range information is described in **Table 3-1**. V3 evaluated the topography and concluded that the SITE elevation ranges from approximately 820 to 1100 feet above mean sea level (AMSL). Seven aquatic features are mapped within the SITE area, Hocking River, Walnut Creek, Abandoned Ohio Canal, and four unnamed streams (**Figure 1**).

Table 3-1: Section, Township, and Range Description

Section	Township, Range	Structure Location
6, 7, 18, 19	16 North, 18 West	33 to 12
24, 25, 36	16 North, 19 West	11 to 63
1, 2, 11, 14, 23, 26, 27, 34, 35	15 North, 19 West	62 to 16
2, 3, 10, 11	14 North, 19 West	15 to 1

### 3.2 NATIONAL WETLANDS INVENTORY MAP

National Wetlands Inventory (NWI) maps were developed to meet a USFWS mandate to map the wetland and deepwater habitats of the U.S. These maps were developed using high altitude aerial photographs and USGS Quadrangle maps as a topographic base. Indicators that exhibited pre-determined wetland characteristics, visible in the photographs, were identified according to a detailed classification system. The NWI map retains some of the detail of the Quadrangle map; however, it is used primarily for demonstration of wetland areas identified by the agency. The maps are accurate to a scale of 1:24,000. In general, the NWI information requires field verification.

NWI data is shown projected over aerial imagery in **Figure 2**. There are 14 NWI features are mapped within the SITE area and described in **Table 3-2**. The presence of NWI features mapped partially or fully within the SITE area suggests the potential presence of wetlands or other regulated aquatic features on-SITE.



Table 3-2: NWI Classification Description

Symbol	Description	Nearest Structure
PEM1A	Palustrine, Emergent, Persistent, Temporarily Flooded	60 South
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	60 South
PUBGx	Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated	32 South
R2UBG	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Intermittently Exposed	18, 15, 1 South
R2UBH	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded	25 North
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	31 North
		3, 2 North
		55 South
		53 South
		48 South
		44 South
		11 South
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	15 North
		3 North

### 3.3 FLOOD INSURANCE RATE MAP

The Federal Emergency Management Agency (FEMA) was developed in 1979 to reform disaster relief and recovery, civil defense, and to prepare and mitigate for natural hazards. The Mitigation Division of FEMA manages the National Flood Insurance Program which provides guidance on how to lessen the impact of disasters on communities through flood insurance, floodplain management, and flood hazard mapping. Proper floodplain management has the ability to minimize the extent of flooding and flood damage and improve stormwater quality by reducing stormwater velocities and erosion. The one percent annual chance flood (100-year flood) boundary must be kept free of encroachment as the national standard for the program.

V3 reviewed digital National Flood Hazard Zone data for Fairfield County, Ohio (**Figure 2**). Various portions of the site are mapped within the 100-year floodway, Flood Zone X, A, and AE (**Table 3-3**).

Table 3-3: Flood Zone Description

Flood Zone	Associated Stream	Nearest Structure
AE	Walnut Creek	4 to 2 North
Floodway		3 North
AE	Hocking River	21 to 19 South
Floodway		19 South
AE	ST-14-PER	15 South
Floodway		
AE	Hunters Run	2 to 1 South
Floodway		1 South

### 3.4 UNITED STATES DEPARTMENT OF AGRICULTURE SOIL SURVEY

V3 reviewed the soils mapped on-SITE using the Natural Resource Conservation Service (NRCS) digital soil survey data for Fairfield County, Ohio. This data is projected over aerial photography, illustrating distinct soil map unit boundaries, in **Figure 3**.





Table 3-4: Soil Survey Description

Soil Map Unit	Description	Hydric within Fairfield County
Ag	Aetna silt loam, occasionally flooded	No
Ah	Aetna silt loam, fan, occasionally flooded	No
AmB	Amanda silt loam, 2 to 6 percent slopes	No
AmB2	Amanda silt loam, 2 to 6 percent slopes, eroded	No
AmC2	Amanda silt loam, 6 to 12 percent slopes, eroded	No
AmD2	Amanda silt loam, 12 to 20 percent slopes, eroded	No
AmE2	Amanda silt loam, 20 to 35 percent slopes, eroded	No
AoC3	Amanda silty clay loam, 6 to 12 percent slopes, severely eroded	No
ApC2	Amanda-Loudonville complex, 6 to 12 percent slopes, eroded	No
ApD2	Amanda-Loudonville complex, 12 to 20 percent slopes, eroded	No
BeA	Bennington silt loam, 0 to 2 percent slopes	No
BeB	Bennington silt loam, 2 to 6 percent slopes	No
Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	No
Cen1B2	Centerburg silt loam, 2 to 6 percent slopes, eroded	No
Cen1C2	Centerburg silt loam, 6 to 12 percent slopes, eroded	No
Crd1B1	Cardington silt loam, 2 to 6 percent slopes	No
CsA	Canal silt loam, 0 to 2 percent slopes	No
Ee	Eel silt loam, gravelly substratum, occasionally flooded	No
FmA	Fox silt loam, 0 to 2 percent slopes	No
FmB	Fox silt loam, 2 to 6 percent slopes	No
GaB	Gallman silt loam, loamy substratum, 2 to 6 percent slopes	No
GnB	Glenford silt loam, 3 to 8 percent slopes	No
LtE	Loudonville-Steinsburg complex, 20 to 35 percent slopes	No
Ma	Marengo clay loam	Yes
Mb	Marengo silt loam, overwash	Yes
Mns3A	Minster silty clay loam, 0 to 1 percent slopes	Yes
Pb	Patton silty clay loam, 0 to 2 percent slopes, rarely flooded	Yes
Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Yes
SkA	Sleeth silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	No
ThA	Thackery silt loam, 0 to 2 percent slopes	No
Ud	Udorthents, loamy	No
UoC	Urban land-Amanda complex, 2 to 12 percent slopes	No
UrB	Urban land-Bennington complex, 0 to 6 percent slopes	No
WdA	Wea silt loam, 0 to 2 percent slopes	No

Five hydric soil unit is situated within the SITE. Marengo clay load (Ma), Marengo silt loam, overwash (Mb), Minister silty clay loam, 0 to 1 percent slopes (Mns3A), Patton silty clay loam, 0 to 2 percent slopes, rarely flooded (Pb), and Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes (Pe), are considered hydric within Fairfield County, Ohio. Soils are considered hydric if more than 50 percent of the soil contains hydric components according to the NRCS Web Soil Survey. The presence of hydric soil units within the SITE area suggests appropriate wetland soils are located on-SITE.

### 3.5 ENDANGERED, THREATENED, AND RARE SPECIES EVALUATION

An official species list obtained from the USFWS IPaC website indicated that the SITE is within the ranges of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), the federally proposed endangered tricolored bat (*Perimyotis subflavus*) and salamander mussel (*Simpsonaias ambigua*); the federally threatened eastern massasaunga rattlesnake





(*Sistrurus catenatus*) and round hickorynut (*Obovaria subrotunda*), and the monarch butterfly (*Danaus plexippus*), a candidate for listing under the Endangered Species Act. The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species. The USFWS stated that if tree clearing cannot be avoided, then seasonal clearing shall be done to avoid adverse effects to the Indiana bats and the northern long-eared bats. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.

Correspondence with the ODNR indicated records of the state species of special concern cerulean warbler (*Setophaga cerulea*) and kidneyshell (*Ptychobranhus fasciolaris*), a Great blue Heron rookery, Appalachian oak forest plant community, and oak-maple forest plant community within a one-mile radius of the SITE. Additionally, the ODNR Division of Fish and Wildlife stated that the SITE is within the range of seven ETR species (**Table 3-5**).

ODNR recommended a desktop habitat assessment followed by a field assessment, if needed, to identify if potential bat hibernacula are present within the Project area. V3 completed a desktop assessment including data on known abandoned or active mines and locations known or suspected of karst geology. The desktop assessment identified no karst features or mine openings within 0.25 mile of the Project area. Further, no suitable bat hibernacula were observed during the field reconnaissance.

Based on the documentation referenced above, additional correspondence with the agencies does not appear to be warranted at this time. If federal permitting or federal financing will be used in future development, additional coordination may be necessary. Copies of agency correspondence can be referenced in **Appendix A**.



Table 3-5: ETR Species Table

Scientific Name	Common Name	State Listed Status	Federally Listed Status	Typical Habitat Description	Habitat Observed In Survey Area	Avoidance Dates	Agency Comment (Appendix A)	Potential Impacts
<b>Mussels</b>								
<i>Ptychobranthus fasciolaris</i>	Kidneyshell	Special Concern	N/A	Medium to large rivers in gravel	Yes	N/A	ODNR - Proposed project not likely to impact this species if no in-water work proposed.	No –work in habitat not proposed

<b>Fishes</b>								
<i>Ichthyomyzon fossor</i>	Northern brook lamprey	Endangered	N/A	Perennial streams	Yes	15 March to 30 June	ODNR - If no in-water work is proposed in a perennial stream, this project is not likely to impact these species	No –work in habitat not proposed
<i>Notropis ariommus</i>	Popeye shiner	Endangered	N/A	Perennial streams	Yes	15 March to 30 June		No –work in habitat not proposed

<b>Birds</b>								
<i>Setophaga cerulea</i>	Cerulean Warbler	Special Concern	N/A	Deciduous forests	No	N/A	ODNR	No
<i>Circus hudsonius</i>	Northern Harrier	Endangered	N/A	Breed and hunt in large marshes and grasslands. Nests on the ground atop mounds	Yes	15 April to 31 July	ODNR - If the habitat will not be impacted, this project is not likely to impact this species.	TBD - If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31.





Mammals								
<i>Myotis sodalis</i>	Indiana bat	Endangered	Endangered	During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees	No	1 April to 30 September	ODNR/USFWS – Cutting of trees is recommended between 1 October and 31 March. If seasonal tree cutting is not possible, a mist net survey or acoustic survey may be conducted by an approved surveyor between 1 June and 15 August.	No - Impacts are avoided with winter tree clearing. If winter tree clearing is not feasible, presence/absence surveys may be needed.
<i>Myotis septentrionalis</i>	Northern long-eared bat	Endangered	Endangered		No		ODNR - If a habitat assessment finds that potential hibernacula are present within 0.25 mile of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the Division of Wildlife (DOW) recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.	
<i>Myotis lucifugus</i>	Little brown bat	Endangered	Endangered		No			
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	N/A		No			



## CHAPTER 4 SITE RECONNAISSANCE

### 4.1 METHODOLOGY

V3 conducted a field investigation at the SITE on March 27 and 28, 2024. During this investigation, V3 noted the presumed land use of the SITE and surrounding area, and evaluated the SITE for the potential presence of wetlands, “Waters of the U.S.,” and natural resources using the findings of the desktop review and field observations. Photographs were taken during the field investigation and are provided in **Appendix B**.

V3 used the Routine Determination Method (RDM) with an established baseline and transects as described in the *1987 Manual* for typical sites over five acres. V3 recorded data from a number of data points (DP) along the transect as a function of diversity of vegetation, property size, soil types, habitat variability, and other SITE features as deemed appropriate by V3. Where evidence of a wetland was suspected, three wetland criteria were applied to determine if the area in question was representative of a wetland using the methodology set forth by USACE. More specifically, V3 visually examined and recorded the dominant vegetation, recorded soil properties such as texture and color using the Munsell Soil Color Chart (Munsell Color Chart), excavated soil pits, and evaluated the primary and secondary hydrologic indicators.

If all three criteria were met, i.e. vegetation, soil properties, and hydrologic indicators, a second DP was established adjacent to the wetland DP in an area outside of the presumed wetland boundary for the purpose of delineating between the wetland and non-wetland areas. Once delineated, V3 continued the RDM to evaluate the remainder of the SITE.

### 4.2 SITE AND ADJACENT PROPERTY LAND USE

The 14.4-mile-long corridor consists of residential, commercial, fallow, and agricultural use land, woodland, and existing substations. Adjacent land use consists of residential, commercial, fallow, and agricultural land, and woodland.

### 4.3 WETLAND SUMMARY

Eight wetlands were identified during this investigation based upon the methodology set forth in the *1987 Manual* and the *Midwest Regional Supplement*. Information that V3 collected at each DP on March 27 and 28, 2024 is described in the following section. This information is summarized on the forms provided in **Appendix C**. An overall SITE delineation map showing placement of the DPs is included as **Figure 4**.

Table 6-1: Delineated Wetlands Identified within the Survey Area

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Proposed Impacts	
	Latitude	Longitude				Score	Category	Temporary Matting Area (acre)	Permanent Impact Area (acre)
WL-12-PEM	39.84744	-82.58657	Yes	PEM	0.06	43.5	Modified 2	TBD	0
WL-10-PEM	39.84171	-82.58895	Yes	PEM	0.17	2	1	TBD	0
WL-5-PEM	39.83423	-82.59153	Yes	PEM	0.11	32	1 or 2 gray zone	TBD	0





WL-68-PEM	39.82181	-82.59758	No	PEM	0.10	31	1 or 2 gray zone	TBD	0
WL-60-PEM	39.80855	-82.61096	Yes	PEM	1.91	39	Modified 2	TBD	0
WL-50-PEM	39.79325	-82.62197	Yes	PEM	0.03	32	1 or 2 gray zone	TBD	0
WL-41-PEM	39.77470	-82.62809	No	PEM	0.40	32.5	1 or 2 gray zone	TBD	0
WL-18-PEM	39.72906	-82.63356	No	PEM	0.05	40	Modified 2	TBD	0

#### 4.3.1 Wetland WL-12-PEM – (0.06-acre PEM on-SITE)

Wetland WL-12-PEM was situated adjacent to Structure 12 and consisted of 0.06 acres of palustrine, emergent wetland (PEM) on-SITE. Wetland WL-12-PEM appears to continue east off-SITE and did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

##### DP WL-12

This DP was collected in the northern portion of Wetland WL-12-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of rice cut grass (*Leersia oryzoides*, OBL., 80%) and Virginia wild rye (*Elymus virginicus*, FACW, 20%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-12

This DP was collected in the upland area adjacent to DP WL-12. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of multiflora rose (*Rosa multiflora*, FACU 8%), Allegheny blackberry (*Rubus alleghensis*, FACU, 2%), Canadian goldenrod (*Solidago canadensis*, FACU, 75%), and Indian-hemp (*Apocynum cannabinum*, FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### 4.3.2 Wetland WL-10-PEM – (0.17-acre PEM on-SITE)

Wetland WL-10-PEM was situated adjacent to Structure 10 and consisted of 0.17 acres of PEM on-SITE. Wetland WL-10-PEM appears to continue east off-SITE and did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

##### DP WL-10

This DP was collected in the west portion of Wetland WL-10-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of Virginia wild rye (FACW, 25%) and garden yellow-rocket (*Barbarea vulgaris*, FAC, 15%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-10

This DP was collected in the upland area adjacent to DP WL-10. This area met hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify





as a wetland. The dominant vegetation for each stratum present consisted of common wheat (*Triticum aestivum*, UPL, 80%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

#### 4.3.3 Wetland WL-5-PEM – (0.11-acre PEM on-SITE)

Wetland WL-5-PEM was situated adjacent to Structure 5 and consisted of 0.11 acres PEM on-SITE. Wetland WL-5-PEM appears to continue east off-SITE and did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

##### DP WL-5

This DP was collected in the northwest portion of Wetland WL-5-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of dark-green bulrush (*Scirpus atrovirens*, OBL, 60%), and Indian-hemp (FAC, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-5

This DP was collected in the upland area adjacent to DP WL-5. This area met the hydric vegetation and hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 5%), red maple (*Acer rubrum*, FAC, 5%), Canadian goldenrod (FACU, 50%), tall false rye grass (*Schedonorus arundinaceus*, FACU, 30%), and deer tongue panic grass (*Dichanthelium clandestinum*, FACW, 20%).

#### 4.3.4 Wetland WL-68-PEM – (0.10-acre PEM on-SITE)

Wetland WL-68-PEM was situated adjacent to Structure 68 and consisted of 0.10 acres of PEM on-SITE. Wetland WL-68-PEM appears to continue east off-SITE and did appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

##### DP WL-68

This DP was collected in the north portion of Wetland WL-68-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of common rush (OBL, 40%) and deer tongue panic grass (FACW, 30%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-68

This DP was collected in the upland area adjacent to DP WL-68. This area met x criteria but did not meet x criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 10%), path rush (*Juncus tenuis*, FAC, 50%), Canadian goldenrod (FACU, 20%), and white heath aster (*Symphotrichum ericoides*, FACU, 10%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

#### 4.3.5 Wetland WL-60-PEM – (1.91-acre PEM on-SITE)

Wetland WL-60-PEM was situated adjacent to Structure 60 and consisted of 1.91 acres of PEM on-site. Wetland WL-60-PEM appears to continue east and west off-SITE and did appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”





**DP WL-60**

This DP was collected in the northeast portion of Wetland WL-60-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of lamp rush (*Juncus effusus*, OBL, 45%), and reed canary grass (*Phalaris arundinacea*, FACW, 25%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

**DP UPL-60**

This DP was collected in the upland area adjacent to DP WL-60. This area met the hydric soil criterion but did not meet the hydrophytic vegetation or hydrology criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 55%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

**DP WL-60A**

This DP was collected in the southwest portion of Wetland WL-60-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of lamp rush (OBL, 20%) and dark-green bulrush (OBL, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), crayfish burrows (C8), geomorphic position (D2), and FAC-neutral test (D5).

**DP UPL-60A**

This DP was collected in the upland area adjacent to DP WL-60A. This area met hydric soil and hydrology criteria but did not meet the hydric vegetation criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Canadian goldenrod (FACU, 70%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2) and saturation (A3).

**4.3.6 Wetland WL-50-PEM – (0.03-acre PEM)**

Wetland WL-50-PEM was situated adjacent to Structure 50 and consisted of 0.03 acres of PEM. Wetland WL-50-PEM did not appear to have a hydrologic connection with any federally jurisdictional “Waters of the U.S.”

**DP WL-50**

This DP was collected in the central portion of Wetland WL-50-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of common fox sedge (*Carex vulpinoidea*, FACW, 100%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included oxidized rhizospheres on living roots (C3), geomorphic position (D2), and FAC-neutral test (D5).

**DP UPL-50**

This DP was collected in the upland area adjacent to DP WL-50. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Japanese bristle grass (*Setaria faberi*, FACU, 70%) and corn residue (*Zea mays*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.





#### 4.3.7 Wetland WL-41-PEM – (0.40-acre PEM on-SITE)

Wetland WL-41-PEM was situated adjacent to Structure 41 and consisted of 0.40 acres of PEM on-SITE. Wetland WL-41-PEM appears to continue west and did appear to have a hydrologic connection with a federally jurisdictional “Waters of the U.S.”

##### DP WL-41

This DP was collected in the north portion of Wetland WL-41-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 5%), white vervain (*Verbena urticifolia*, FAC, 20%), and reed canary grass (FACW, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-41

This DP was collected in the upland area adjacent to DP WL-41. This area met hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 15%) and tall false rye grass (FACU, 70%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

##### DP WL-41A

This DP was collected in the south portion of Wetland WL-41-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of common fox sedge (FACW, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-41A

This DP was collected in the upland area adjacent to DP WL-41A. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Japanese bristle grass (FACU, 60%) No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### 4.3.8 Wetland WL-8-PEM – (0.05-acre PEM)

Wetland WL-18-PEM was situated adjacent to Structure 18 and consisted of 0.05 acres of PEM. Wetland WL-18-PEM did appear to have a hydrologic connection with a federally jurisdictional “Waters of the U.S.”

##### DP WL-18

This DP was collected in the southern portion of Wetland WL-18-PEM. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (FACW, 98%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included geomorphic position (D2), and FAC-neutral test (D5).

##### DP UPL-18

This DP was collected in the upland area adjacent to DPWL-18. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Northern catalpa (*Catalpa speciosa*, FACU, 50%),





multiflora rose (FACU, 15%), and Virginia wild rye (FACW, 50%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### 4.4 DATA POINT SUMMARY

Below is a description of the information collected at each additional DP during the March 27 and 28, 2024 field investigation that was not associated with an identified wetland area. The purpose of collecting these DPs was to describe the remaining characteristics of the SITE. Information that was collected at each DP is summarized on the forms provided in **Appendix C**. Their placement is depicted in **Figure 4**.

##### DP 33A

This DP was collected north of Structure 33 at West Millersport Station. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 50%) and Canadian goldenrod (FACU, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

##### DP 33

This DP was collected south of Structure 33 at West Millersport Station. This area met the hydric vegetation criteria but did not meet any other criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of garden yellow-rocket (FAC, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

##### DP 31

This DP was collected north of Structure 31. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of purple dead-nettle (*Lamium purpureum*, UPL, 48%) and corn residue (UPL, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

##### DP 28

This DP was collected north of Structure 28. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (*Glycine max*, UPL, 60). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

##### DP 25

This DP was collected north of Structure 25. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 5%), poison hemlock (*Conium maculatum*, FACW, 30%), purple dead-nettle (UPL, 30%), and yellow nut sedge (*Cyperus esculentus*, FACW, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

##### DP 22

This DP was collected north of Structure 22. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 40%), garden yellow-rocket (FAC, 20%), and common chickweed (*Stellaria media*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.





**DP 19**

This DP was collected south of Structure 19. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 70%) and common chickweed (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 16**

This DP was collected south of Structure 16. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (FACW, 45%) and Indian-hemp (FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 14**

This DP was collected north of Structure 14. This area met the hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 60%) and annual ryegrass (*Lolium multiflorum*, UPL, 30%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

**DP 12**

This DP was collected south of Structure 12. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Callery pear (*Pyrus calleryana*, UPL, 40%), black elder (*Sambucus nigra*, FACU, 15%), crow garlic (*Allium vineale*, FACU, 30%), and Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 10**

This DP was collected south of Structure 10. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red osier dogwood (*Cornus alba*, FACW, 30%), Allegheny blackberry (FACU, 20%), and Canadian goldenrod (FACU, 40%). The soil profile met the depleted matrix (F3) indicator for hydric soil. No indicators of wetland hydrology were observed.

**DP 8**

This DP was collected north of Structure 8. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of common wheat (UPL, 80%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 6**

This DP was collected north of Structure 6. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of slough sedge (*Carex atherodes*, OBL, 100%). This DP was in a residential yard, therefore there was no soil pit taken. No indicators of wetland hydrology were observed.





**DP 4**

This DP was collected north of Structure 4. This area met the hydrophytic vegetation and wetland hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of lamp rush (30%, OBL), Canadian goldenrod (25%, FACU), and tall false rye grass (20%, FACU). No indicators of hydric soils were observed. Evidence of wetland hydrology included high water table (A2) and saturation (A3).

**DP 4A**

This DP was collected south of Structure 4. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 100%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 3**

This DP was collected north of Structure 3. This area met the hydric vegetation and hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of yellow ironweed (*Verbesina alternifolia*, FACW, 25%), Canadian goldenrod (FACW, 20%), and stinging nettle (*Urtica dioica*, FACW, 20%). No indicators of hydric soils were observed. Evidence of wetland hydrology included geomorphic position (D2), and FAC-neutral test (D5).

**DP 2**

This DP was north of Structure 2. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 30%), rape (*Brassica rapa*, FACW, 15%), purple dead-nettle (UPL, 10%), and butterweed (*Packera glabella*, FACW, 10%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 71**

This DP was collected north of Structure 71. This area met the hydrology criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red osier dogwood (FACW, 30%), Allegheny blackberry (FACU, 15%), Canadian goldenrod (FACU, 25%), and purple leaf willowherb (*Epilobium coloratum*, OBL, 20%). No indicators of hydric soils were observed. Evidence of wetland hydrology included high water table (A2), saturation (A3), and geomorphic position (D2).

**DP 70**

This DP was collected north of Structure 70. This area met the hydric soil criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Japanese bristle grass (FACU, 35%), yellow bristle grass (*Setaria pumila*, FAC, 35%), and Kentucky blue grass (*Poa pratensis*, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of wetland hydrology were observed.

**DP 68**

This DP was collected north of Structure 68. This area did not meet any wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each





stratum present consisted of Allegheny blackberry (FACU, 30%), autumn olive (*Elaeagnus umbellata*, UPL, 105), Kentucky blue grass (FAC, 60%), and common dandelion (*Taraxacum officinale*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### DP 63

This DP was collected north of Structure 63. This area met hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 100%) This DP was in a residential yard, therefore there was no soil pit taken. No indicators of wetland hydrology were observed.

#### DP 62A

This DP was collected northwest of Structure 62. This area met the hydric vegetation and hydrology criteria but did not meet the hydric soil criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of red maple (*Acer rubrum*, FAC, 30%), Amur honeysuckle (*Lonicera maackii*, UPL, 15%), Narrow-Leaf Cat-Tail (*Typha angustifolia*, OBL, 50%), garden yellow-rocket (FAC, 20%), and Kentucky blue grass (FAC, 20%). No indicators of hydric soils were observed. Evidence of wetland hydrology included saturation (A3) and FAC-neutral test (D5).

#### DP 62

This DP was collected north of Structure 62. This area met the wetland hydrology criteria but did not meet any other criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted gray dogwood (*Cornus racemosa*, FAC, 50%), tall false rye grass (FACU, 20%), and rape (FACW, 10%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### DP 59

This DP was collected in the central portion of the SITE. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 10%), apple mint (*Mentha X rotundifolia*, FAC, 10%), bristle grass (FACU, 30%), meadow garlic (*Allium canadense*, FACU, 30%), and Indian-hemp (FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### DP 57

This DP was collected south of Structure 57. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Virginia wildrye (FACW, 50%) and rape (*Brassica napus*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

#### DP 52

This DP was collected in the central portion of the SITE. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Allegheny blackberry (FACU, 20%), fix sedge (FACW, 40%), and tall false rye grass (FACU, 35%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.





**DP 48**

This DP was collected north of Structure 48. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Canadian goldenrod (FACU, 40%), tall false rye grass (FACU, 30%), and Japanese bristle grass (FACU, 25%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 46**

This DP was collected south of Structure 46. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 40%) and purple dead-nettle (UPL, 30%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 44**

This DP was collected north of Structure 44. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black walnut (*Juglans nigra*, FACU, 10% tree layer, 30% shrub layer), multiflora rose (FACU, 25%), dewberry (*Rubus caesius*, FACU, 20%), smooth brome (FACU, 50%), poison hemlock (FACW, 20%), tiger lily (*Lilium lancifolium*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 42**

This DP was collected south of Structure 42. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 50%) and white clover (*Trifolium repens*, FACU, 30%). Since the area consists of active pasture, no soil profile was obtained in this area. No indicators of wetland hydrology were observed.

**DP 41**

This DP was collected south of Structure 41. This area met the hydric soil profile but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of European buckthorn (*Rhamnus cathartica*, FAC, 30%), tree of heaven (*Ailanthus altissima*, FACU, 15%), tall false rye grass (FACU, 30%), and woodland strawberry (*Fragaria vesca*, UPL, 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 40**

This DP was collected south of Structure 40. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of European buckthorn (FAC, 40%) and tall false rye grass (FACU, 80%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 39**

This DP was collected north of Structure 39. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 80%). Since the area consists of a residential lawn, no soil profile was obtained in this area. No indicators of wetland hydrology were observed.





**DP 36**

This DP was collected north of Structure 36. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of orchard grass (*Dactylis glomerata*, FACU, 80%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 34**

This DP was collected north of Structure 34. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 50%) and common chickweed (FACU, 40%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 32**

This DP was collected south of Structure 32, north of the stormwater pond. This area met the hydric vegetation and soil criteria but did not meet the hydrology criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (FACW, 100%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of hydrology observed included one secondary indicator, FAC-neutral test (D5).

**DP 32A**

This DP was collected south of Structure 32, north of the stormwater pond. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Johnson grass (*Sorghum halepense*, FACU, 60%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 31A**

This DP was collected south of Structure 31 in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 50%) and Kentucky blue grass (FAC, 45%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 26**

This DP was collected north of Structure 26. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Callery pear (UPL, 40%), Amur honeysuckle (UPL, 10%), common chickweed (FACU, 50%), and winter creeper (*Euonymus fortunei*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 23**

This DP was collected south of Structure 23. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 40%), Kentucky blue grass (FAC, 30%), and white clover (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.





**DP 22A**

This DP was collected south of Structure 22 in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Callery pear (UPL, 40%), broomsedge (*Andropogon virginicus*, FACU, 40%), and yellow bristle grass (FAC, 30%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 20**

This DP was collected southeast of Structure 20. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of soybean residue (UPL, 40%), common chickweed (FACU, 40%), and purple dead-nettle (UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 15**

This DP was collected north of Structure 15. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Kentucky blue grass (FAC, 40%), poison hemlock (FACW, 20%), and purple coneflower (*Echinacea pallida*, UPL, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 13**

This DP was collected north of Structure 13. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Kentucky blue grass (FAC, 60%), groundivy (*Glechoma hederacea*, FACU, 20%), and white clover (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 11**

This DP was collected south of Structure 11. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of orchard grass (FACU, 75%) and tall false rye grass (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 8A**

This DP was collected north of Structure 8 in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of sassafras (*Sassafras albidum*, FACU, 75%), orchard grass (FACU, 50%), white avens (*Geum canadense*, FAC, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 7**

This DP was collected north of Structure 7. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black raspberry (UPL, 10%), orchard grass, (FACU, 35%), wand panic grass (*Panicum virgatum*, FAC, 30%), Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.





**DP 5A**

This DP was collected south of Structure 5, in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of corn residue (UPL, 60%) and common chickweed (FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 3A**

This DP was collected south of Structure 3, in the South Baltimore – West Lancaster portion of the line. This area met no wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of tall false rye grass (FACU, 100%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 1A**

This DP was collected north of Structure 1. This area met no wetland criteria.. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black walnut (FACU, 20% tree layer, 20% shrub layer), black locust (*Robinia pseudoacacia*, FACU, 10% tree layer, 30% shrub layer), and poison hemlock (FACW, 70%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

**DP 1**

This DP was collected north of Structure 1, near West Lancaster Station. This area met the hydric vegetation criteria but did not meet any other wetland criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black locust (FACU, 20%), poison hemlock (FACW, 20%), reed canary grass (FACW, 20%), Kentucky blue grass (FAC, 20%), and Canadian goldenrod (FACU, 20%). No indicators of hydric soils were observed. Evidence of hydrology observed included one secondary indicator, FAC-neutral test (D5).

#### 4.5 DRAINAGE FEATURES, STREAMS, AND OTHER POTENTIAL “WATERS OF THE U.S.”

Seventeen streams and two open water bodies were identified during this investigation using the methods described in Chapter 2. Information that V3 collected at each feature on March 27 and 28, 2024 is described in the following section. An overall SITE delineation map is included as **Figure 4**.

Table 4-7: Delineated Streams Identified within the Survey Area

Feature	Location		Stream Type	Delineated Length (LF)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility
	Latitude	Longitude					Method	Score	Category / Rating / OAC Designation	
ST-31PER	39.884393	-82.570045	Perennial	200	15	6	HHEI	46	Class II	Eligible
ST-25-PER	39.871932	-82.576556	Perennial	115	15	4.5	QHEI	40	Poor	Eligible
ST-15-PER	39.854039	-82.583946	Perennial	140	25	8	QHEI	33	Poor	Eligible
Walnut Creek	39.830733	-82.592574	Perennial	130	70	8	QHEI	59	Fair	Eligible





ST-2-PER	39.828794	-82.593100	Perennial	75	15	1	HHEI	54	Class II	Eligible
ST-68-INT	39.821861	-82.597822	Intermittent	370	3	2	HHEI	52	Class II	Eligible
ST-63-EPH	39.814531	-82.605325	Ephemeral	150	2	1	HHEI	37	Class II	Eligible
ST-55-INT	39.800803	-82.617154	Intermittent	145	20	3	HHEI	65	Class II	Eligible
ST-53-INT	39.798781	-82.618683	Intermittent	170	15	3	HHEI	79	Class III	Eligible
ST-48-EPH	39.789227	-82.623228	Ephemeral	115	1	0.5	HHEI	37	Class II	Eligible
ST-44-INT	39.780704	-82.626219	Intermittent	80	15	4	HHEI	55	Class II	Eligible
ST-44-EPH	39.775429	-82.627703	Ephemeral	175	3	1	HHEI	27	Class I	Eligible
ST-42-INT	39.775106	-82.627853	Intermittent	240	12	4	HHEI	63	Class II	Eligible
Hocking River	39.729227	-82.633761	Perennial	330	60	40	QHEI	56.5	Fair	Eligible
ST-14-PER	39.725387	-82.631711	Perennial	70	30	8	QHEI	40.25	Poor	Eligible
ST-11-INT	39.719129	-82.638527	Intermittent	110	20	2.5	HHEI	26	Class I	Eligible
Hunters Run	39.702036	-82.638647	Perennial	200	60	11	QHEI	44	Poor	Eligible

#### 4.5.1 ST-31-PER – (200-linear feet, Perennial stream)

ST-31-PER is located in northeast of Structure 31 and consisted of 200 linear feet of perennial stream within the SITE. The substrate of ST-31-PER consisted of silt and clay. ST-31-PER has an average width at the ordinary high water mark (OHWM) of 6 feet within the SITE. ST-31-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.2 ST-25-PER – (75-linear feet, Perennial stream)

ST-25-PER is located north of Structure 25 and consisted of 75 linear feet of perennial stream within the SITE. The substrate of ST-25-PER consisted of sand and silt. ST-25-PER has an average width at the OHWM of 4.5 feet within the SITE. ST-25-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.3 ST-15-PER – (140-linear feet, Perennial stream)

ST-15-PER is located north of Structure 15 and consisted of 140 linear feet of perennial stream within the SITE. The substrate of ST-15-PER consisted of silt, clay, and sand. ST-15-PER has an average width at the OHWM of 8 feet within the SITE. ST-15-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.4 Walnut Creek – (130-linear feet, Perennial stream)

Walnut Creek is located north of Structure 3 and consisted of 130 linear feet of perennial stream within the SITE. The substrate of Walnut Creek consisted of cobble and gravel. Walnut Creek has an average





width at the OHWM of 8 feet within the SITE. Walnut Creek appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.5 ST-2-PER – (75-linear feet, Perennial stream)

ST-2-PER is located north of Structure 2 and consisted of 75 linear feet of perennial stream within the SITE. The substrate of ST-2-PER consisted of silt. ST-2-PER has an average width at the OHWM of 1 foot within the SITE. ST-2-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.6 ST-68-INT – (370-linear feet, Intermittent stream)

ST-68-INT is located northeast of Structure 68 and consisted of 370 linear feet of intermittent stream within the SITE. The substrate of ST-68-INT consisted of silt and clay. ST-68-INT has an average width at the OHWM of 2 feet within the SITE. ST-68-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.7 ST-63-EPH – (150-linear feet, Ephemeral stream)

ST-63-EPH is located northeast of Structure 63 and consisted of 150 linear feet of ephemeral stream within the SITE. ST-63-EPH emerges from a tile drain, flows southeastward and discharges into a second tile drain. The substrate of ST-63-EPH consisted of silt. ST-63-EPH has an average width at the OHWM of 1 foot within the SITE. ST-63-EPH did not appear to be a relatively permanent water and will likely not qualify as federally jurisdictional “Waters of the U.S.”

#### 4.5.8 ST-55-INT – (145-linear feet, Intermittent stream)

ST-55-INT is located southwest of Structure 55 and consisted of 145 linear feet of ST-55-INT stream within the SITE. The substrate of ST-55-INT consisted of sand and clay. ST-55-INT has an average width at the OHWM of 3 feet within the SITE. ST-55-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.9 ST-53-INT – (170-linear feet, Intermittent stream)

ST-53-INT is located east of Structure 53 and consisted of 170 linear feet of intermittent stream within the SITE. The substrate of ST-53-INT consisted of cobble, gravel, and sand. ST-53-INT has an average width at the OHWM of 3 feet within the SITE. ST-53-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.10 ST-48-EPH – (115-linear feet, Ephemeral stream)

ST-48-EPH is located south of Structure 49 and consisted of 115 linear feet of ephemeral stream within the SITE. The substrate of ST-48-EPH consisted of clay and silt. ST-48-EPH has an average width at the OHWM of 5 feet within the SITE. ST-48-EPH did not appear to be a relatively permanent water and will likely not qualify as federally jurisdictional “Waters of the U.S.”

#### 4.5.11 ST-44-INT – (80-linear feet, Intermittent stream)

ST-44-INT is located northwest of Structure 44 and consisted of 80 linear feet of intermittent stream within the SITE. The substrate of ST-44-INT consisted of cobble and gravel. ST-44-INT has an average width at the OHWM of 4 feet within the SITE. ST-44-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.12 ST-44-EPH – (175-linear feet, Ephemeral stream)

ST-44-EPH is located southwest of Structure 42 and consisted of 175 linear feet of ephemeral stream within the SITE. The substrate of ST-44-EPH consisted of silt. ST-44-EPH has an average width at the





OHW of 1 foot within the SITE. ST-44-EPH appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.13 ST-42-INT – (240-linear feet, Intermittent stream)

ST-42-INT is located southwest of Structure 42 and consisted of 240 linear feet of intermittent stream within the SITE. The substrate of ST-44-EPH consisted of gravel, sand, and silt. ST-44-EPH has an average width at the OHWM of 4 feet within the SITE. ST-44-EPH appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.14 Hocking River – (330-linear feet, Perennial stream)

Hocking River is located southeast of Structure 19 and consisted of 300 linear feet of Hocking River stream within the SITE. The substrate of Hocking River consisted of cobble, sand, and silt. Hocking River has an average width at the OHWM of 40 feet within the SITE. Hocking River appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.” Additionally, Hocking River is designated by the U.S. Army Corps of Engineers (USACE) as a Section 10 Navigable Waterway 79 miles upstream of the confluence of the Ohio River.

#### 4.5.15 ST-14-PER – (70-linear feet, Perennial stream)

ST-14-PER is located north of Structure 15 and consisted of 70 linear feet of perennial stream within the SITE. The substrate of ST-14-PER consisted of cobble, gravel, and sand. ST-14-PER has an average width at the OHWM of 8 feet within the SITE. ST-14-PER appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.16 ST-11-INT – (110-linear feet, Intermittent stream)

ST-11-INT is located northeast of Structure 11 and consisted of 110 linear feet of intermittent stream within the SITE. The substrate of ST-11-INT consisted of clay and silt. ST-11-INT has an average width at the OHWM of 25 feet within the SITE. ST-11-INT appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.17 Hunters Run – (200-linear feet, Perennial stream)

Hunters Run is located north of Structure 1 and West Lancaster Station. It consisted of 300 linear feet of perennial stream within the SITE. The substrate of Hunters Run consisted of cobble, gravel, and sand. Hunters Run has an average width at the OHWM of 11 feet within the SITE. Hunters Run appears to be a relatively permanent water and will likely qualify as federally jurisdictional “Waters of the U.S.”.

#### 4.5.18 OW-32-POND – (±0.50-acre, Pond)

OW-32-POND is located south of Structure 32 of the SITE. OW-32-POND appears to be a manmade feature.

#### 4.5.19 OW-22-POND – (±0.56-acre, Pond)

OW-22-POND is located north of Structure 22 of the SITE. OW-22-POND appears to be a manmade feature.





## CHAPTER 5 CONCLUSIONS

On March 27 and 28, 2024, V3 performed a wetland delineation of the SITE beginning at West Millersport Station, southwest of OH-204 and OH-37, Millersport, OH, and extends approximately 4.6 mile southwest to South Baltimore Station and continues approximately 9.8 miles southwest to West Lancaster Station, northeast of US Highway 22 and OH-57 in Fairfield County, Ohio.

Table 5-1: Aquatic Features Identified On-SITE

Feature	Feature Type	Size On-SITE	Delineation Figure Sheet
WL-12-PEM	Emergent Wetland	0.06 ac	10
WL-10-PEM	Emergent Wetland	0.17 ac	11
WL-5-PEM	Emergent Wetland	0.11 ac	13
WL-68-PEM	Emergent Wetland	0.10 ac	15
WL-60-PEM	Emergent Wetland	1.91 ac	18
WL-50-PEM	Emergent Wetland	0.03 ac	22
WL-41-PEM	Emergent Wetland	0.40 ac	26
ST-31-PER	Perennial stream	200 lf	2
ST-25-PER	Perennial stream	115 lf	4
ST-15-PER	Perennial stream	140 lf	8
Walnut Creek	Perennial stream	130 lf	13
ST-2-PER	Perennial stream	75 lf	14
ST-68-INT	Intermittent stream	370 lf	15
ST-63-EPH	Ephemeral stream	150 lf	17
ST-55-INT	Intermittent stream	145 lf	20
ST-53-INT	Intermittent stream	170 lf	20
ST-48-EPH	Ephemeral stream	115 lf	22
ST-44-INT	Intermittent stream	80 lf	24
ST-44-EPH	Ephemeral stream	175 lf	25
ST-42-INT	Intermittent stream	240 lf	25 & 26
Hocking River	Perennial stream	330 lf	36
ST-14-PER	Perennial stream	70 lf	37
ST-11-INT	Intermittent stream	110 lf	38
Hunters Run	Perennial stream	200 lf	42
OW-32-POND	Pond	0.50 ac	30
OW-22-POND	Pond	0.56 ac	34

- Seventeen streams were identified on-SITE. All streams, except ST-63-EPH and ST-48-EPH, appear to be relatively permanent waters that will likely qualify as federally jurisdictional “Waters of the U.S.”.
- Eight wetlands were identified on-SITE. Wetlands WL-68-PEM, WL-41-PEM and WL-18-PEM appear to have a connection to relatively permanent waters, therefore, will likely qualify as a “Waters of the U.S.”. All the other wetlands did not appear to have direct connection to relatively permanent waters and are likely to be considered isolated.





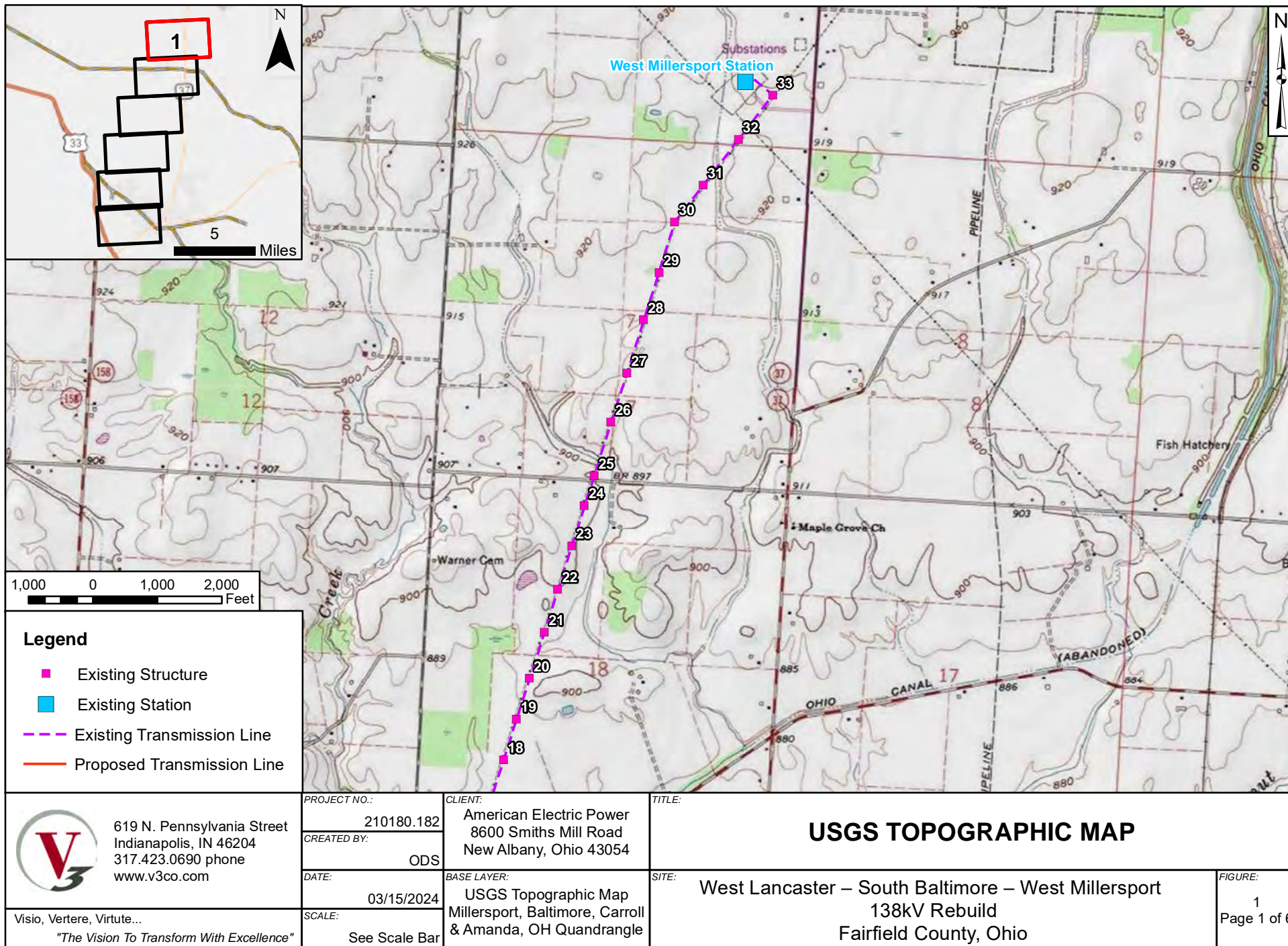
- Two stormwater ponds were identified on-SITE. One stormwater pond was identified within an inaccessible residential area. The ponds appear to be isolated man-made features.
- An official species list obtained from the USFWS IPaC website indicated that the SITE is within the ranges of the federally endangered Indiana bat, northern long-eared bat, the proposed endangered tricolored bat, the federally threatened eastern massasauga, and round hickorynut, the proposed endangered salamander Mussel and the candidate for listing monarch butterfly. The USFWS made recommendations to avoid impacts to on-SITE streams and wetlands, and to avoid clearing potential roost trees for the federally listed bat species outside the recommended seasonal clearing dates, 1 October to 31 March. The USFWS stated the due to the project, type, size, and location, the agency does not anticipate adverse effects to any other federally endangered, threatened, or proposed species or proposed or designated critical habitat.
- Correspondence with the ODNR indicated records of the state species of special concern cerulean warbler (*Setophaga cerulea*) and kidneyshell (*Ptychobranthus fasciolaris*), a Great blue Heron rookery, Appalachian oak forest plant community, and oak-maple forest plant community within a one-mile radius of the SITE. Potentially suitable habitat for the kidneyshell was observed within the SITE. The documented plant communities are anticipated to occur within forested areas adjacent to the SITE. Additionally, the ODNR Division of Fish and Wildlife stated that the SITE is within the range of seven ETR species. The ODNR stated that the project is not likely to impact these species if habitat is not impacted and gave recommendations to avoid and minimize impacts to these species and their habitats.



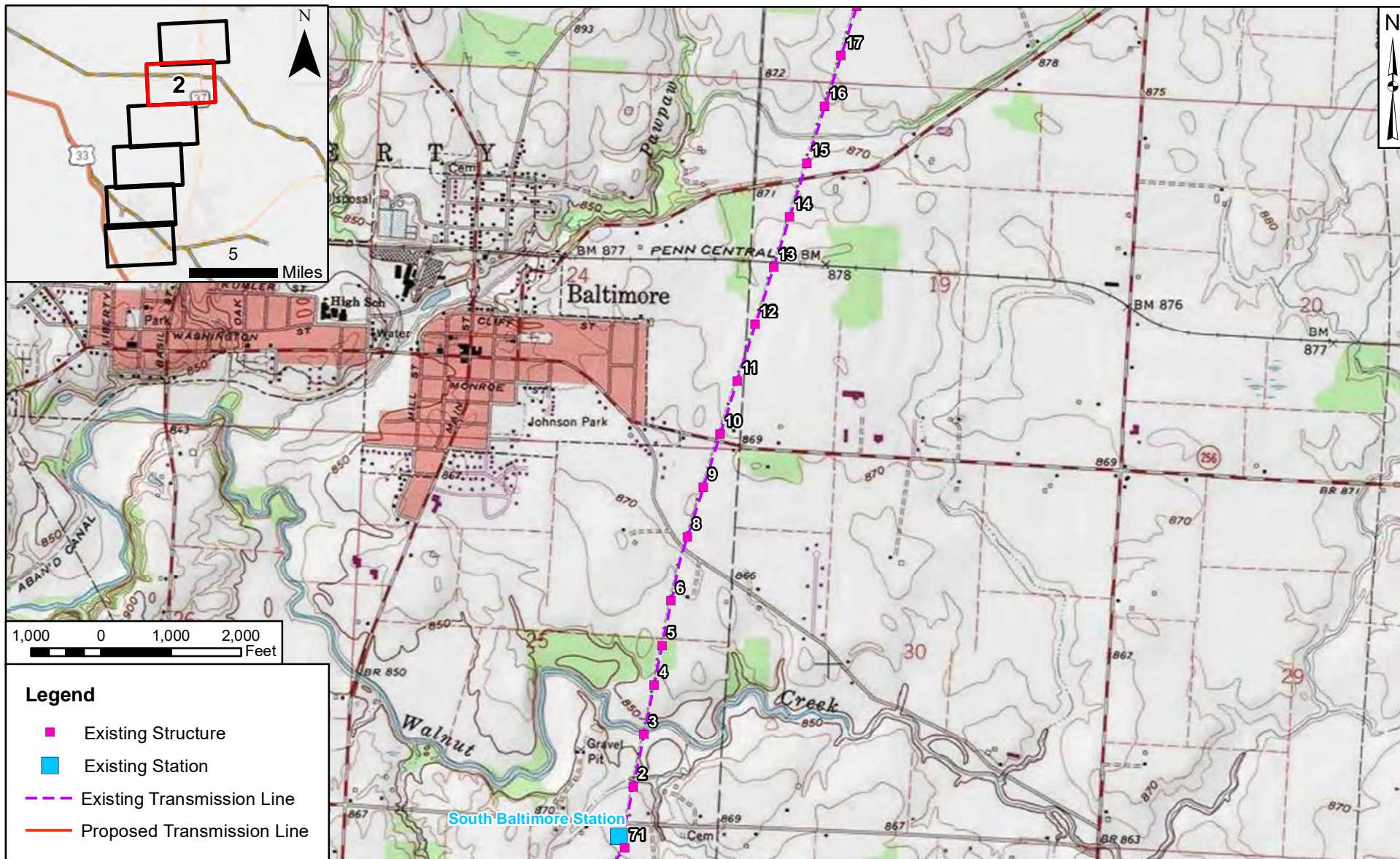
## Figures






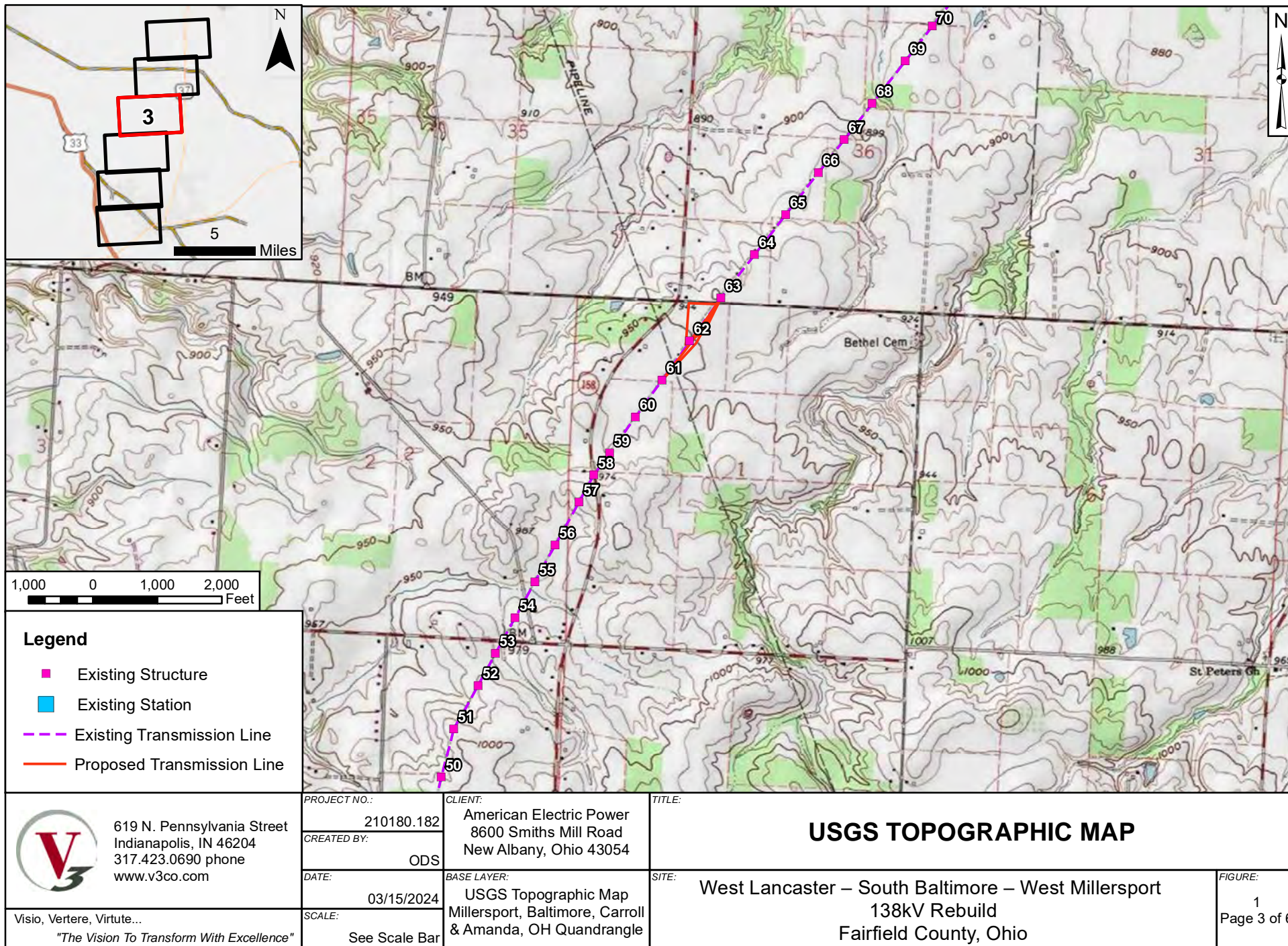




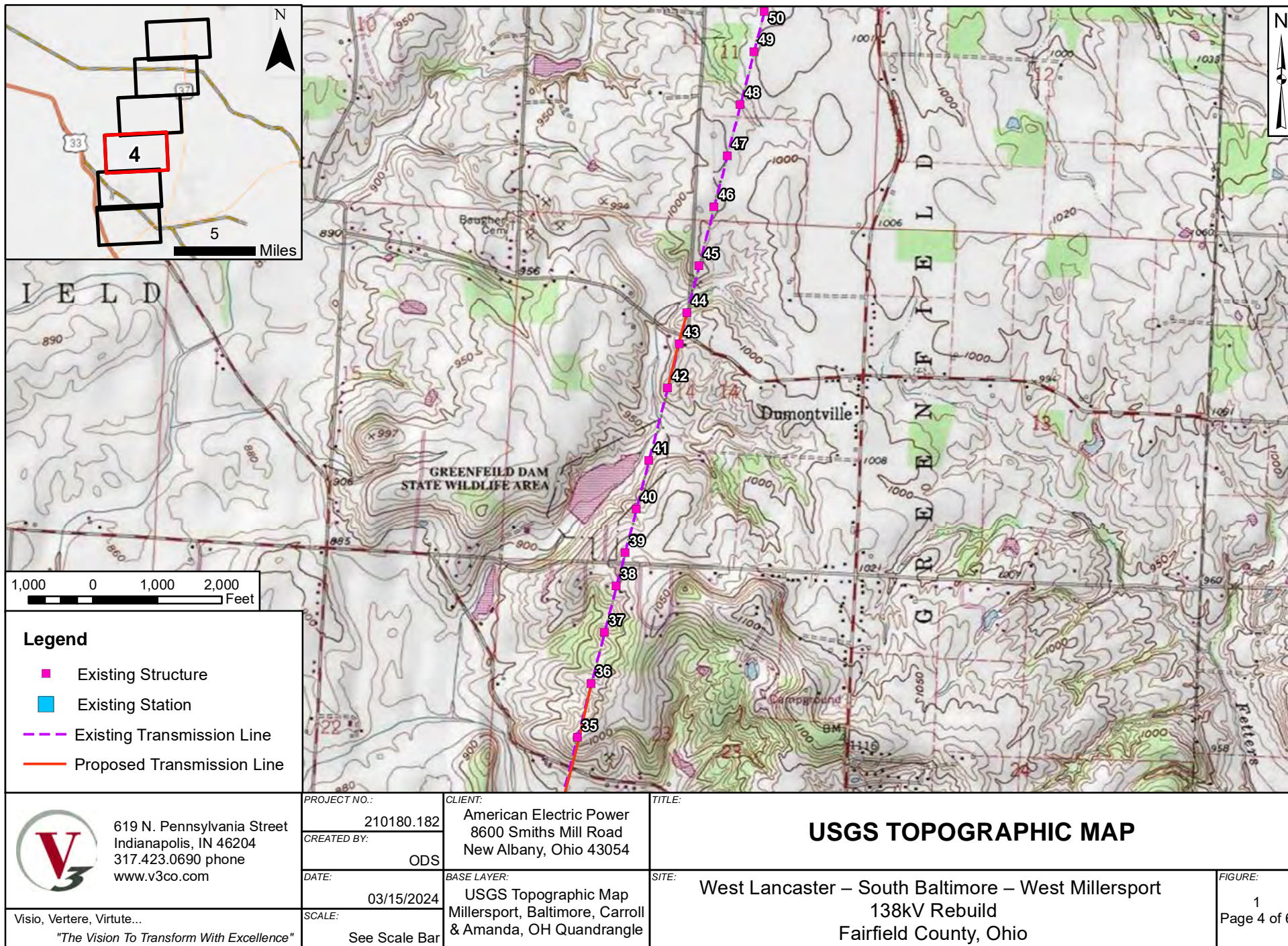


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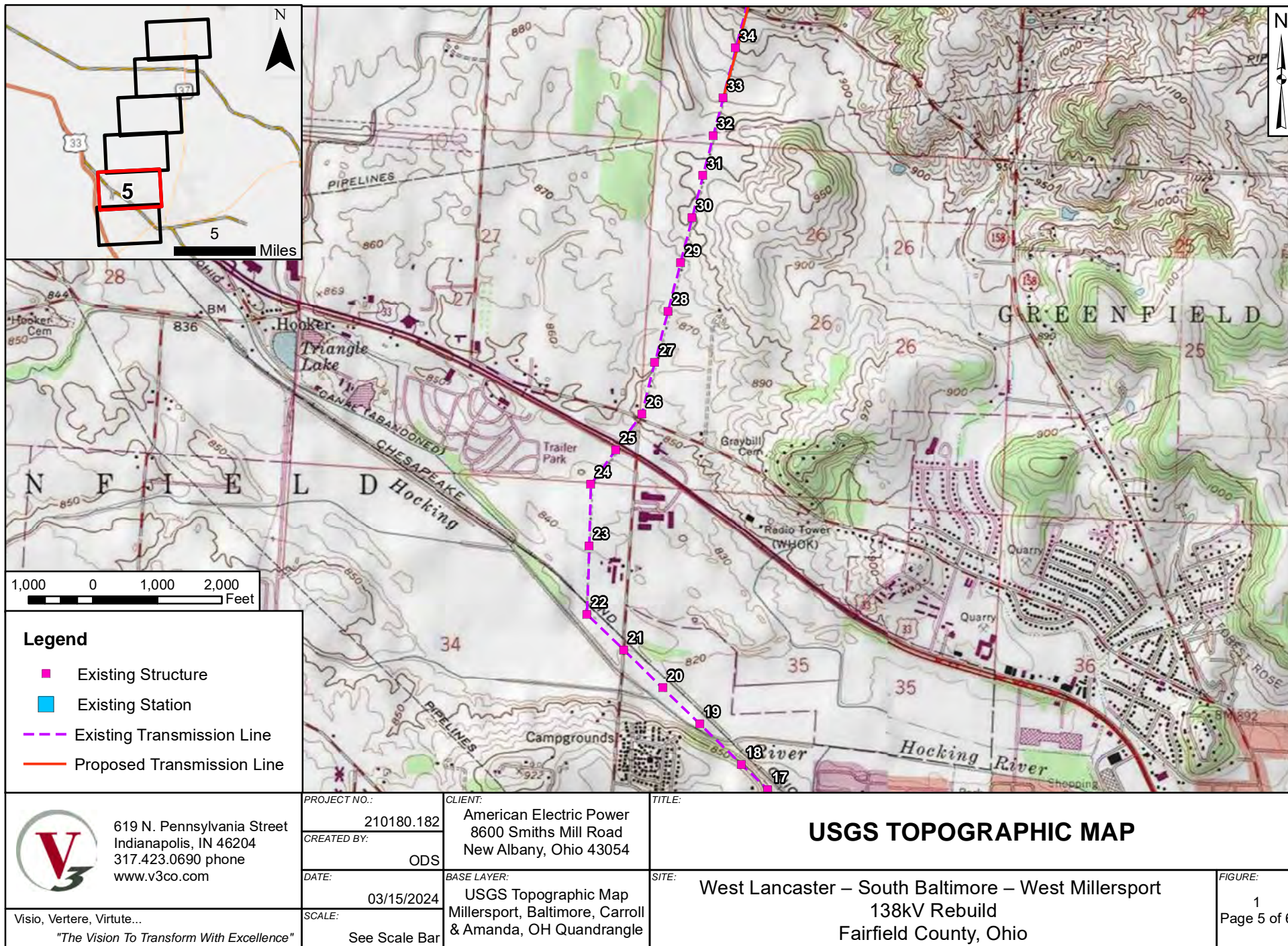




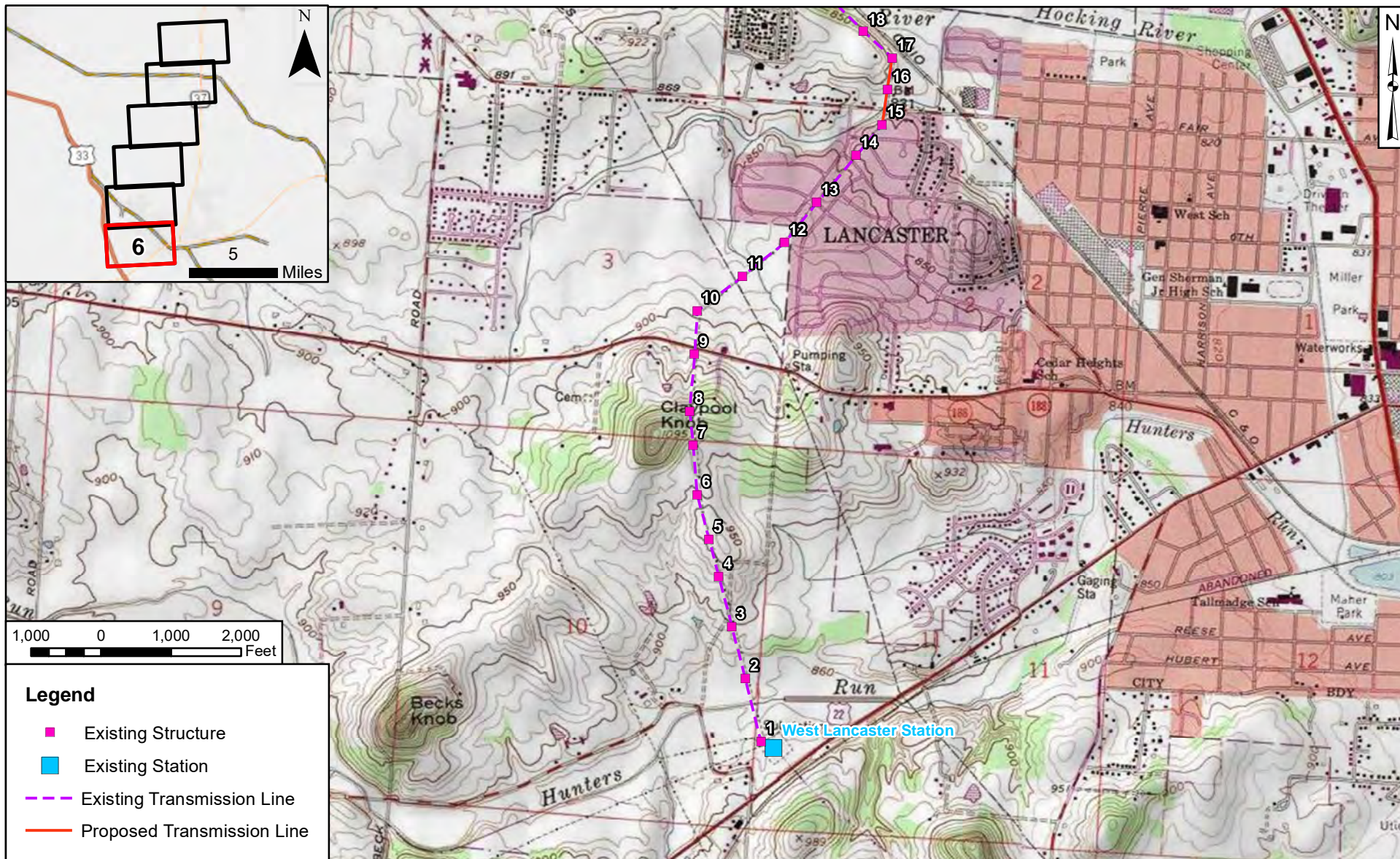







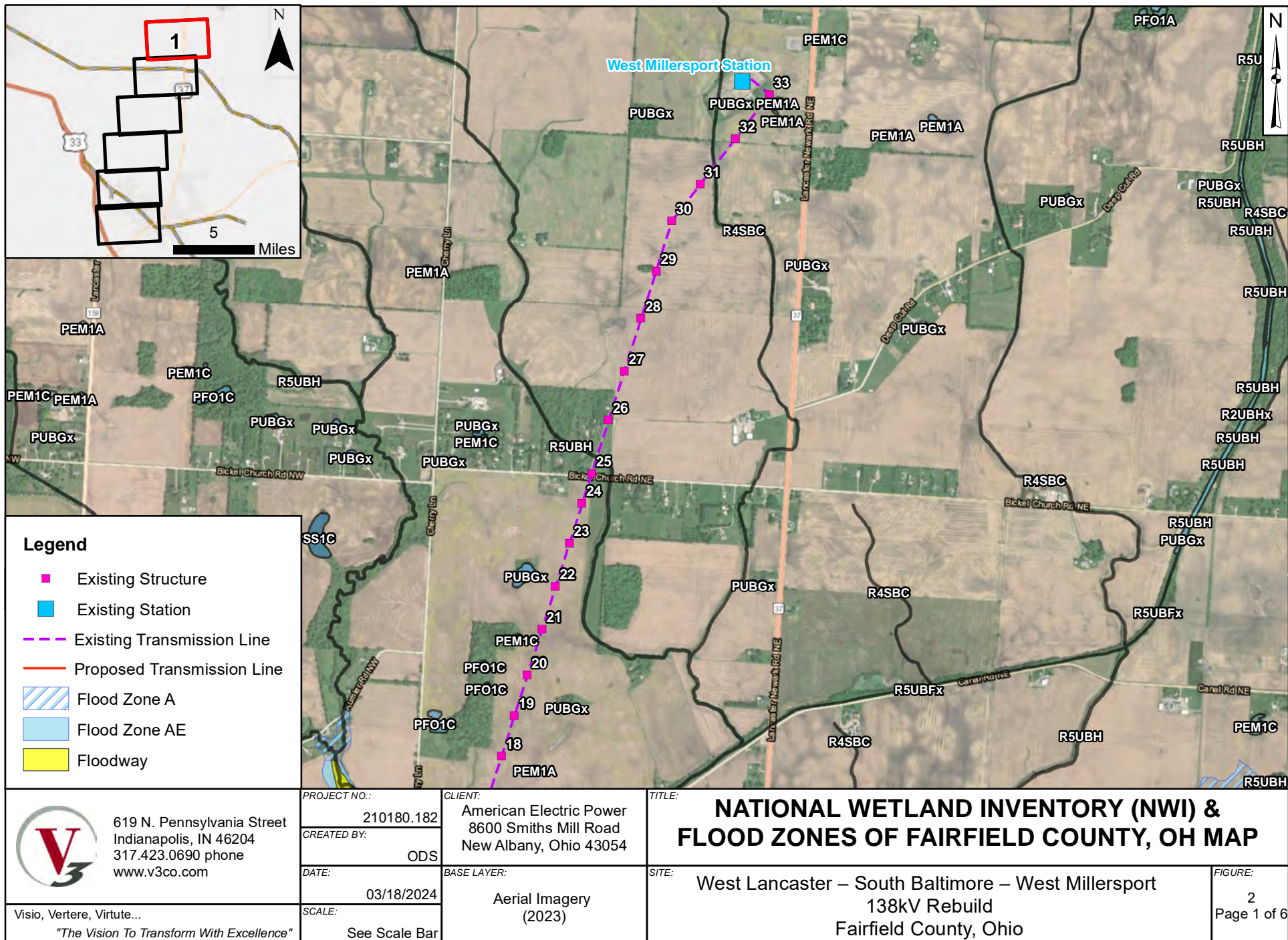




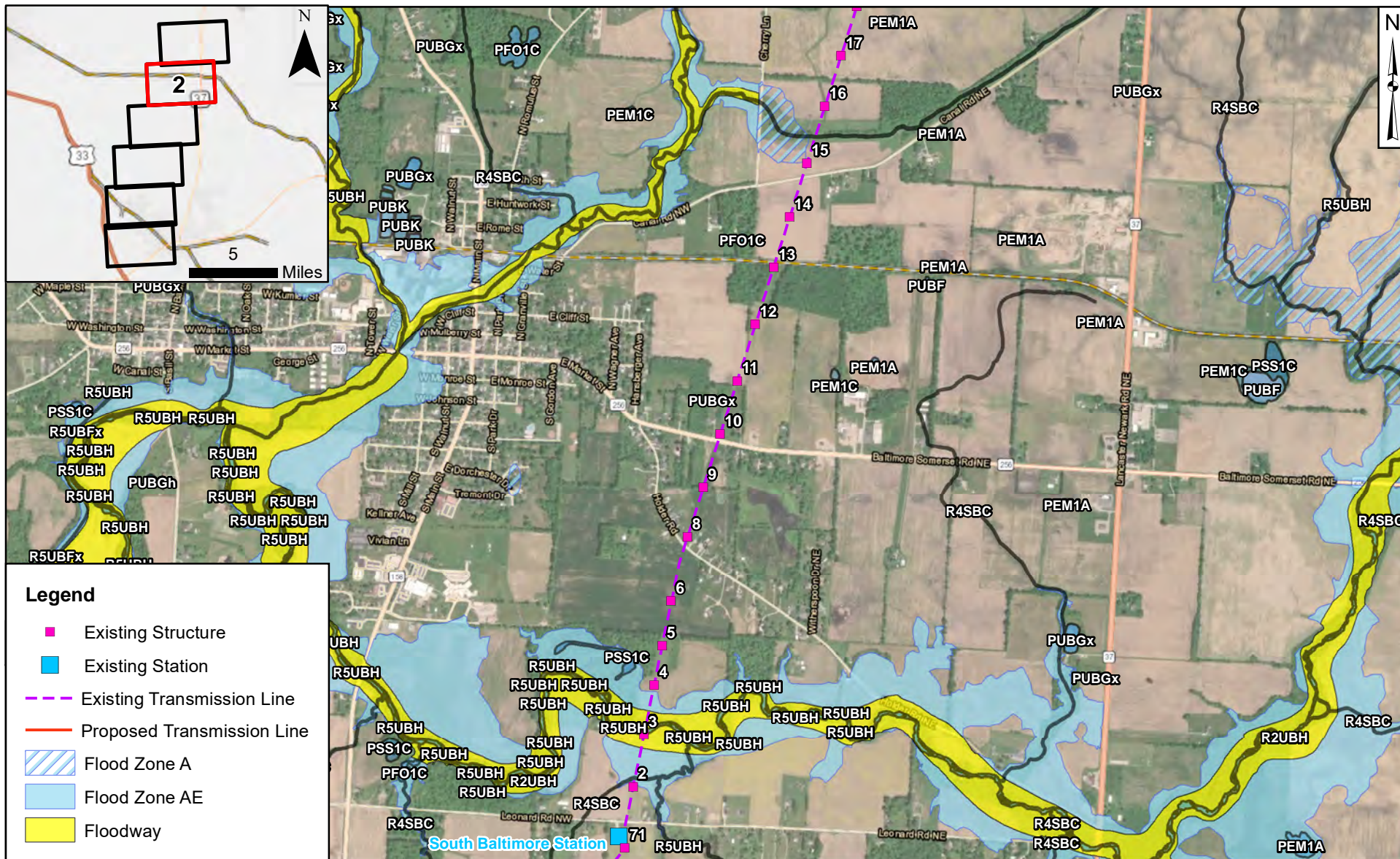


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			FIGURE: 1 Page 6 of 6	








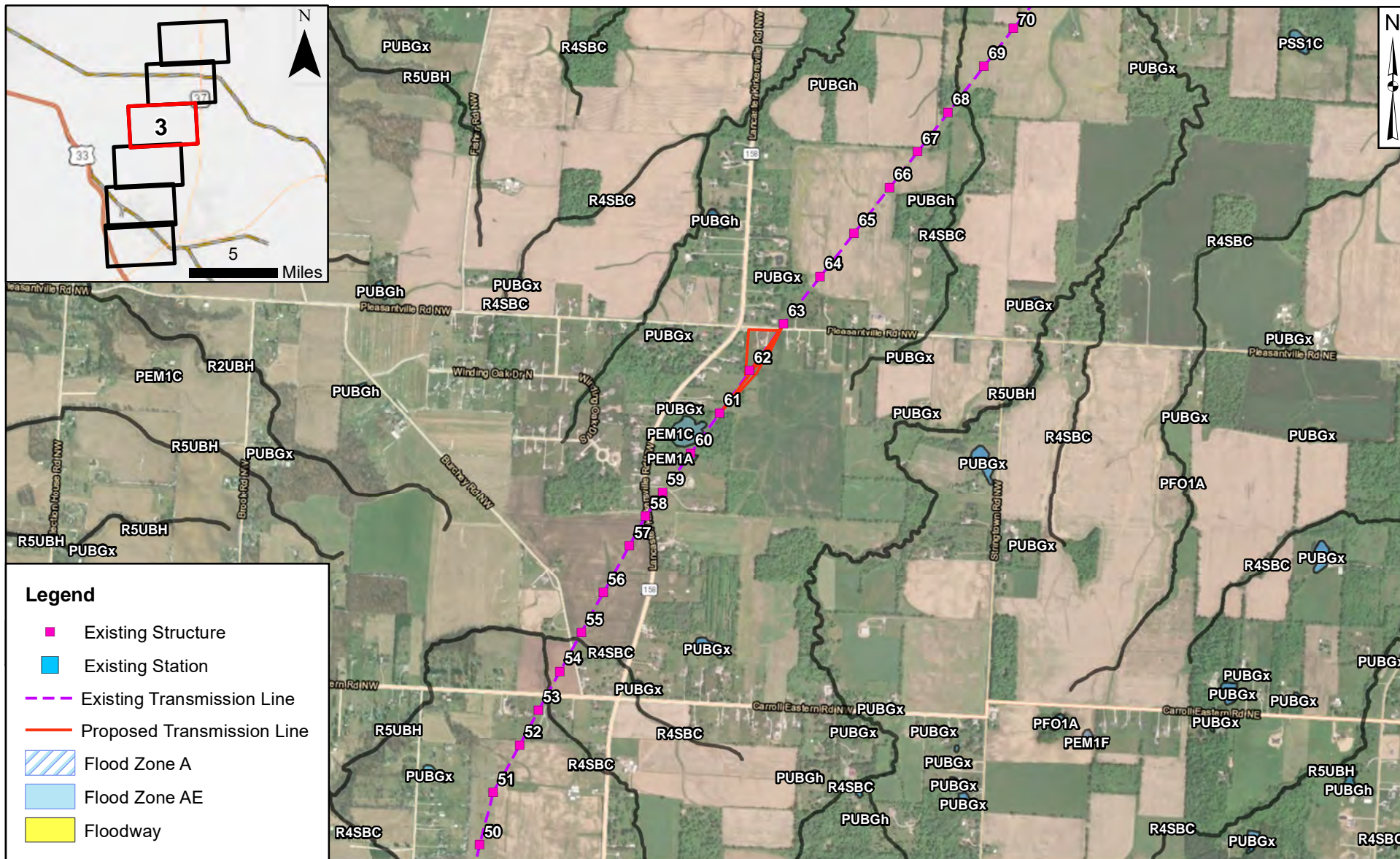


**Legend**

- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Flood Zone A
- Flood Zone AE
- Floodway


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	CREATED BY: ODS			
	DATE: 03/18/2024		SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	SCALE: See Scale Bar			
		BASE LAYER: Aerial Imagery (2023)	FIGURE: 2 Page 2 of 6	



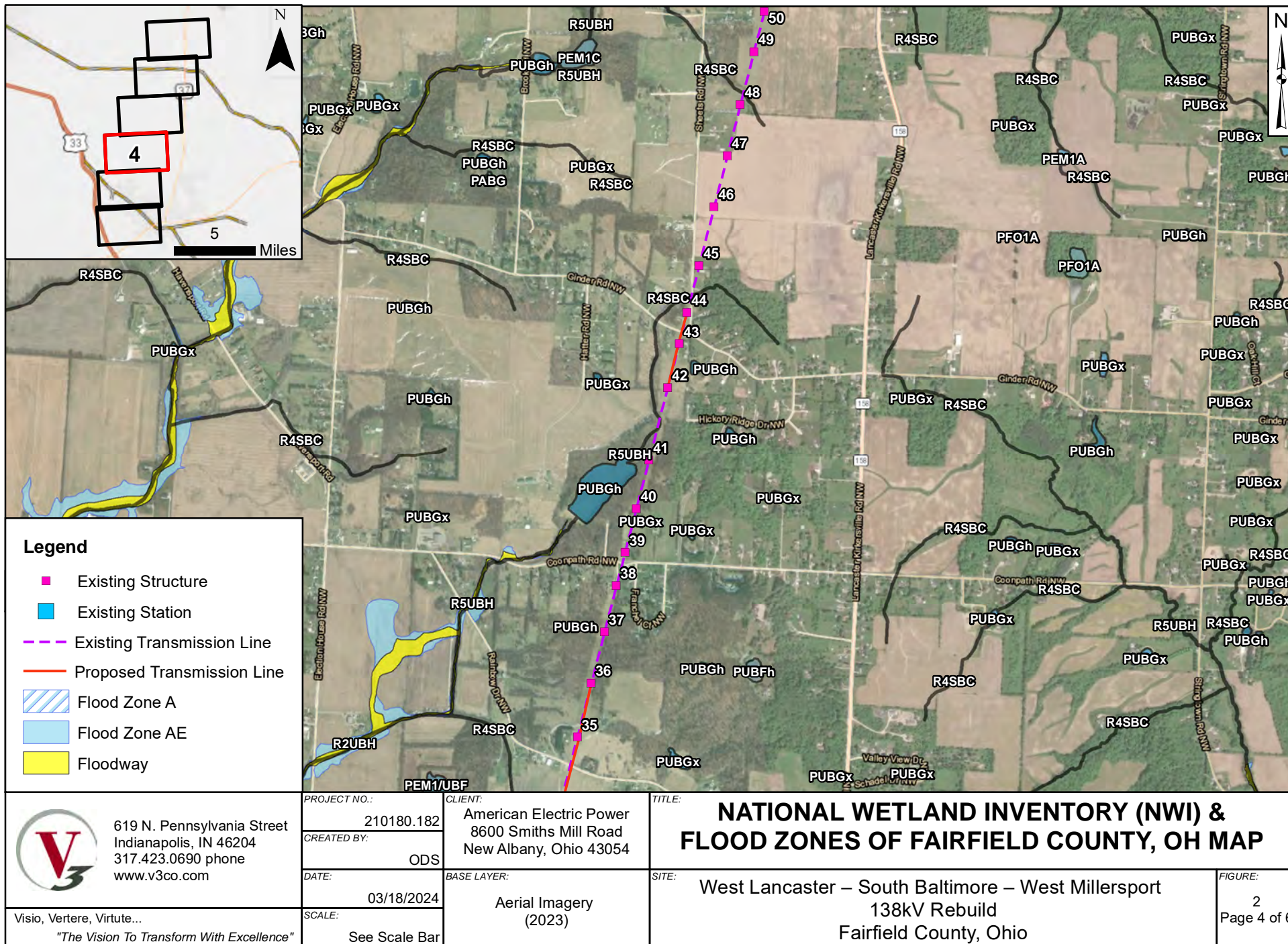


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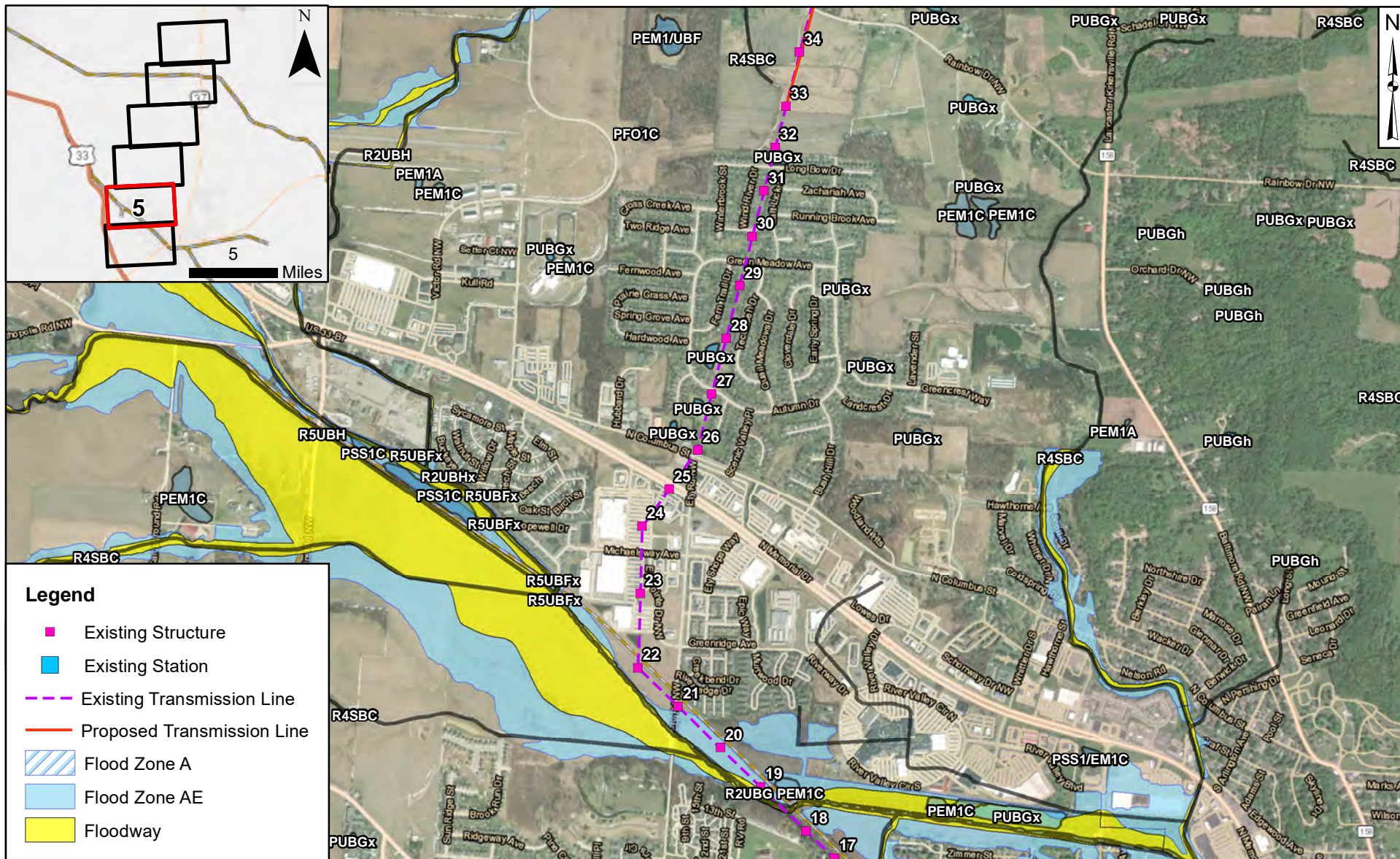
- Existing Structure
- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- Flood Zone A
- Flood Zone AE
- Floodway


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	CREATED BY: ODS			
	DATE: 03/18/2024	BASE LAYER: Aerial Imagery (2023)	SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	FIGURE: 2 Page 3 of 6
SCALE: See Scale Bar				
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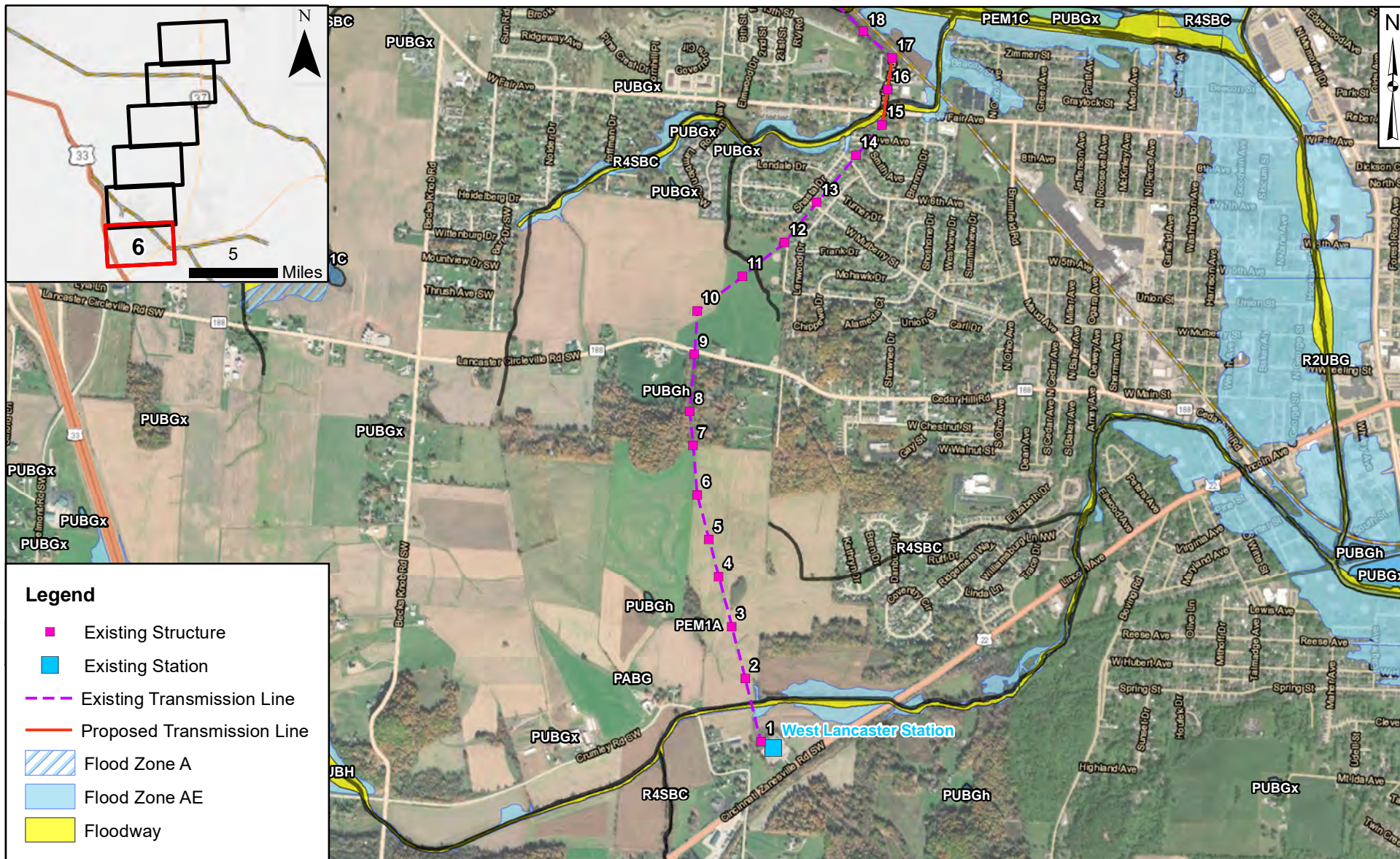







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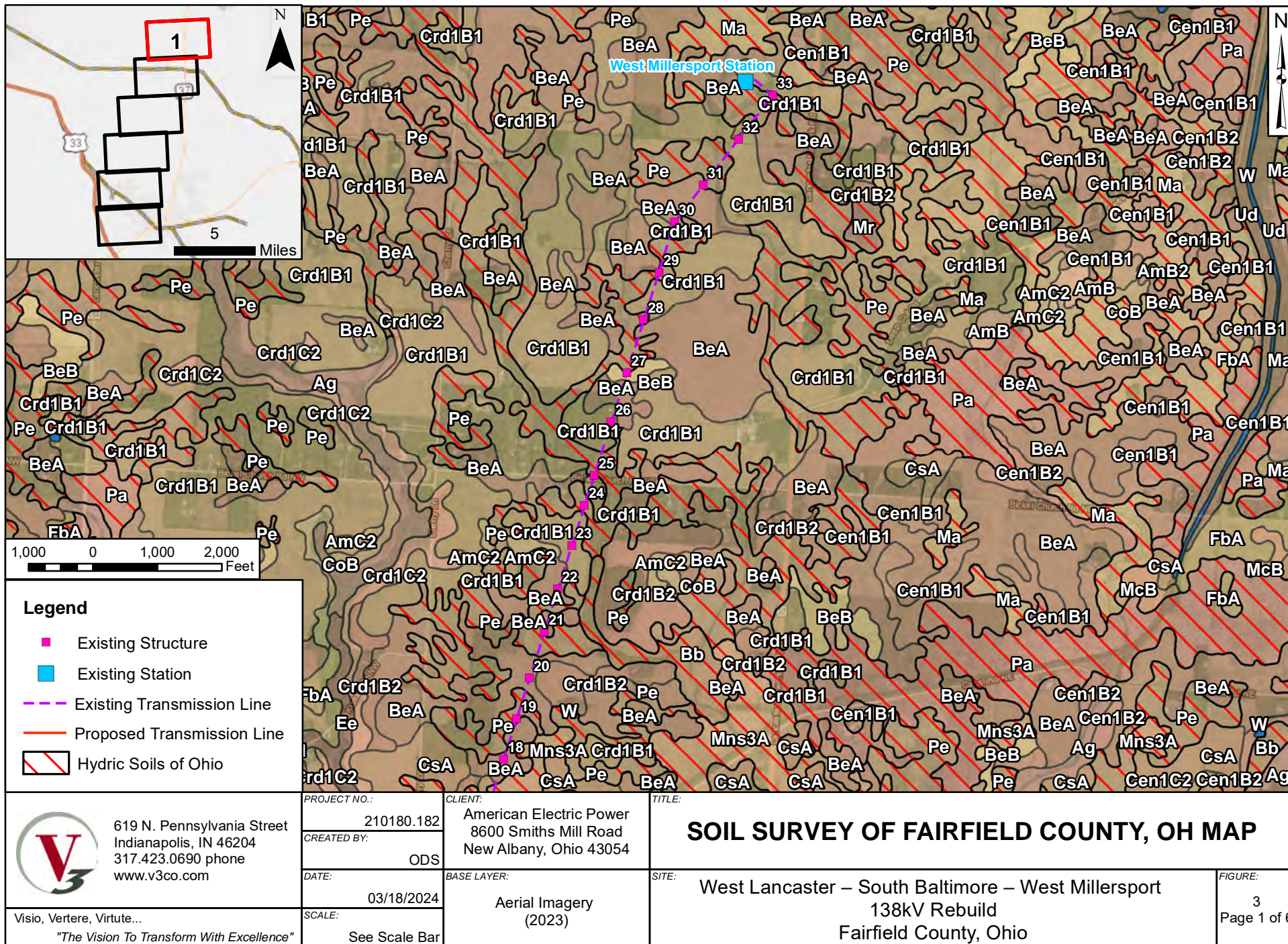


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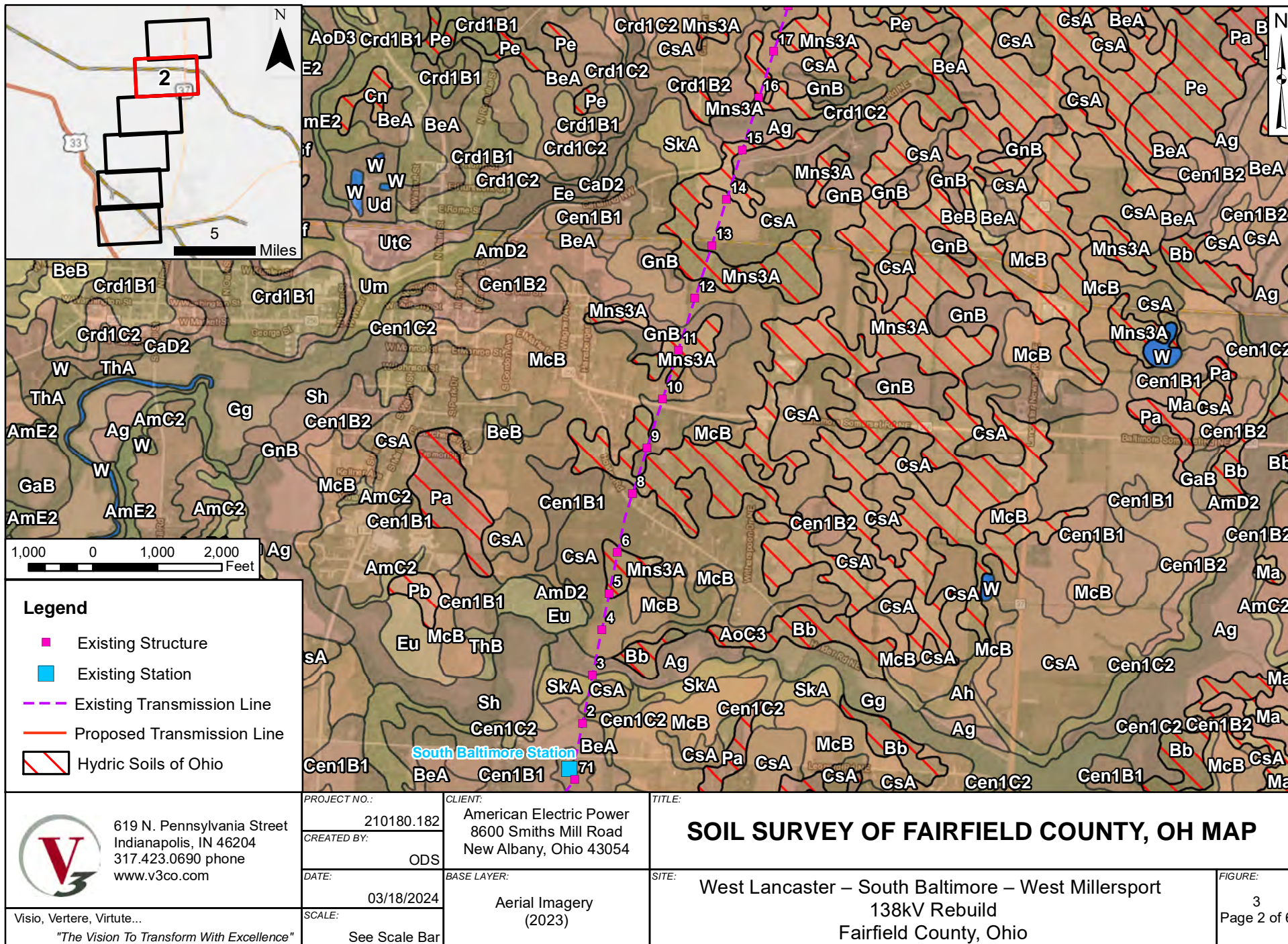
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- Existing Station
- Existing Transmission Line
- Proposed Transmission Line
- ▨ Flood Zone A
- Flood Zone AE
- Floodway

 <p>619 N. Pennsylvania Street Indianapolis, IN 46204 317.423.0690 phone www.v3co.com</p> <p>Visio, Vertere, Virtute... "The Vision To Transform With Excellence"</p>	PROJECT NO.: 210180.182	CLIENT: American Electric Power 8600 Smiths Mill Road New Albany, Ohio 43054	TITLE: <b>NATIONAL WETLAND INVENTORY (NWI) &amp; FLOOD ZONES OF FAIRFIELD COUNTY, OH MAP</b>	
	CREATED BY: ODS			
	DATE: 03/18/2024		SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	SCALE: See Scale Bar			
		BASE LAYER: Aerial Imagery (2023)	FIGURE: 2 Page 6 of 6	

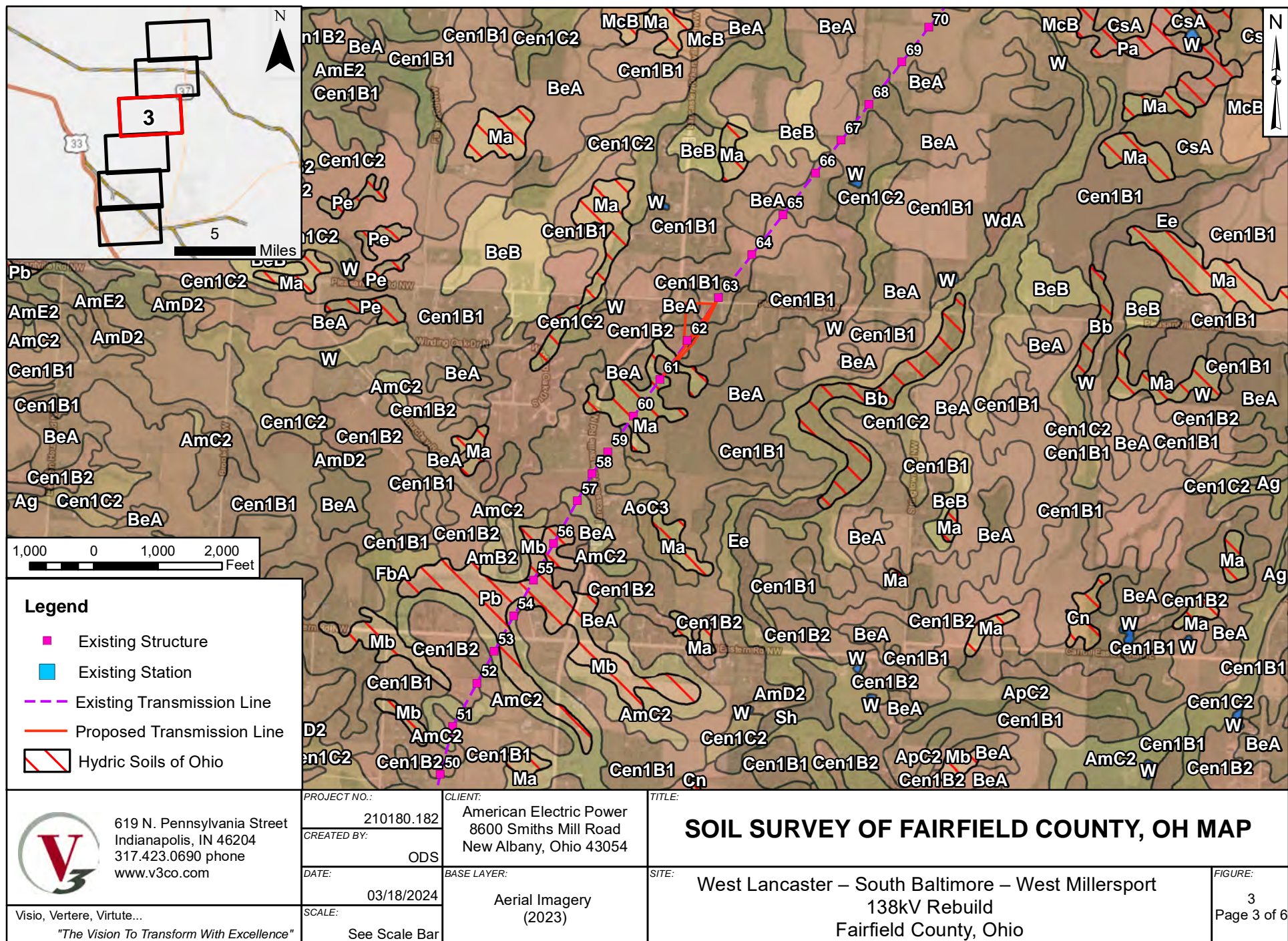




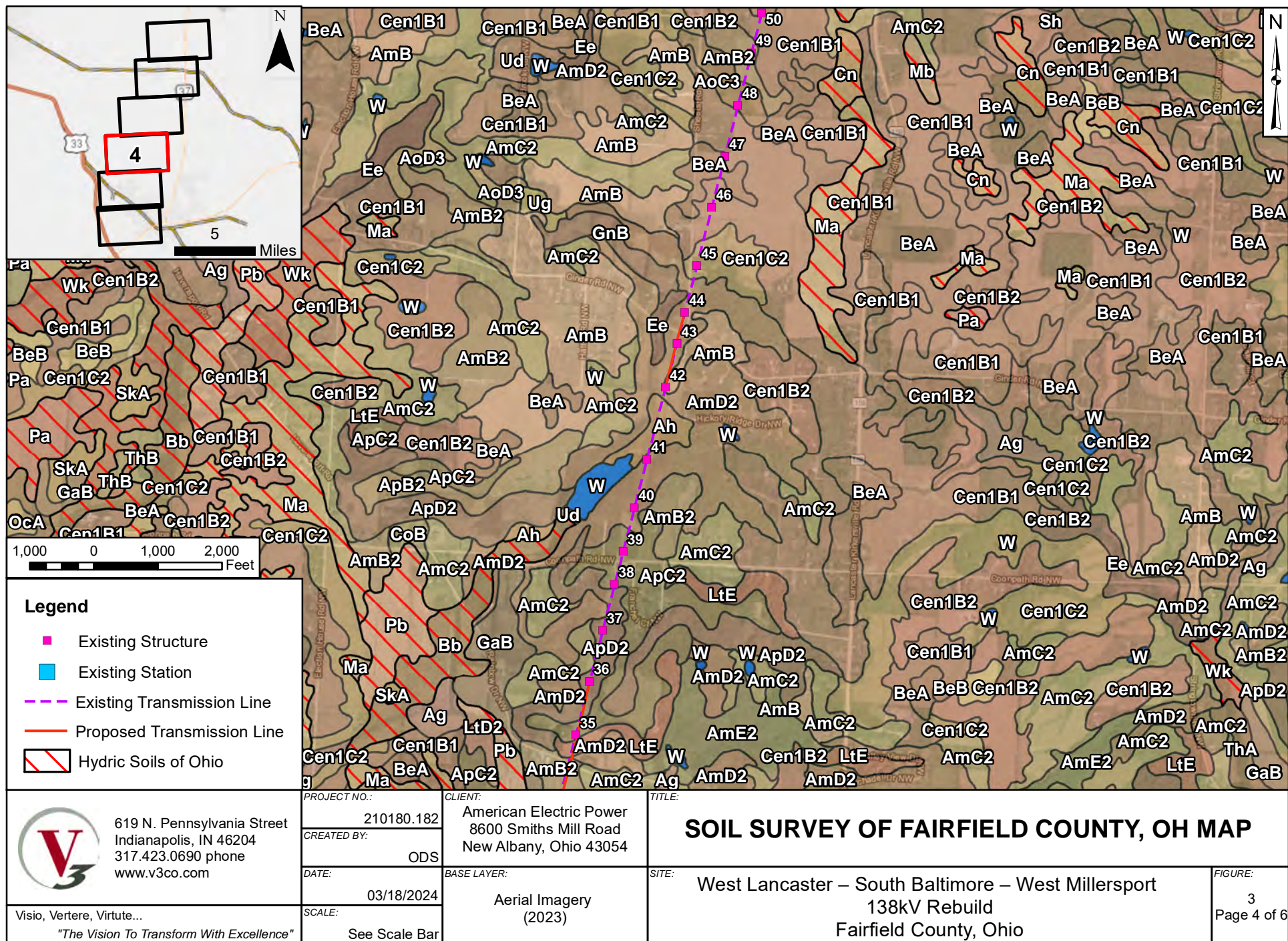




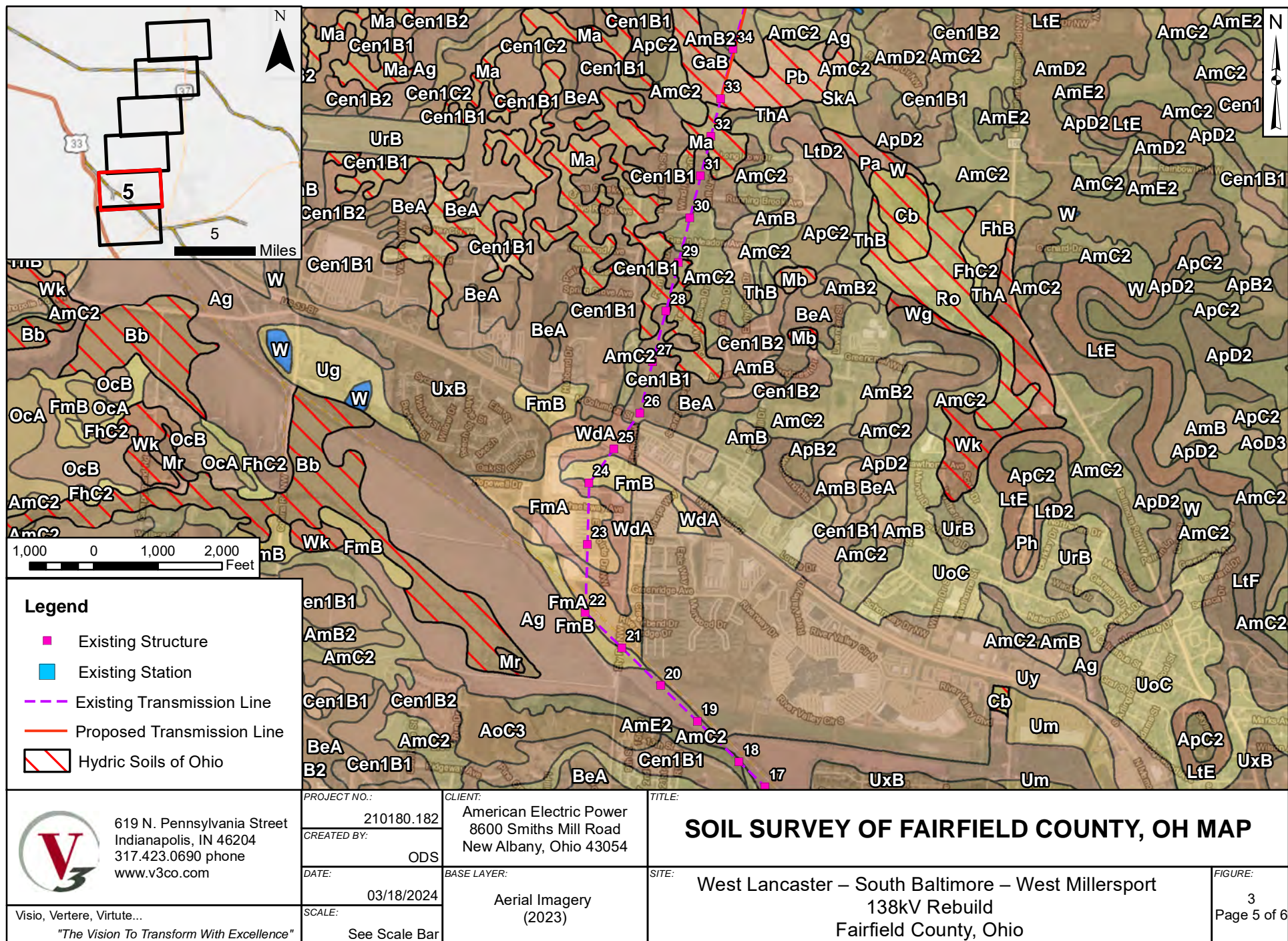




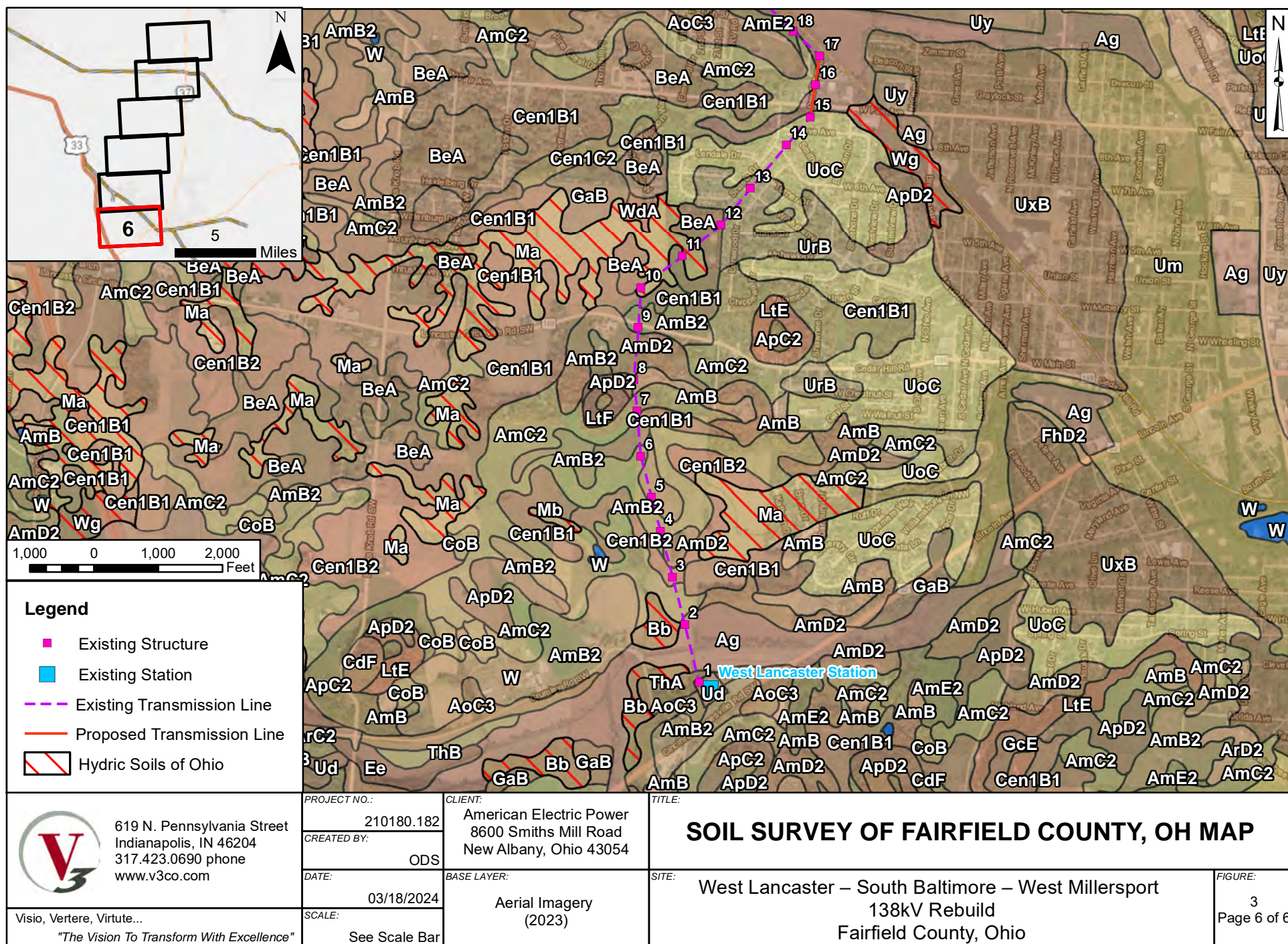












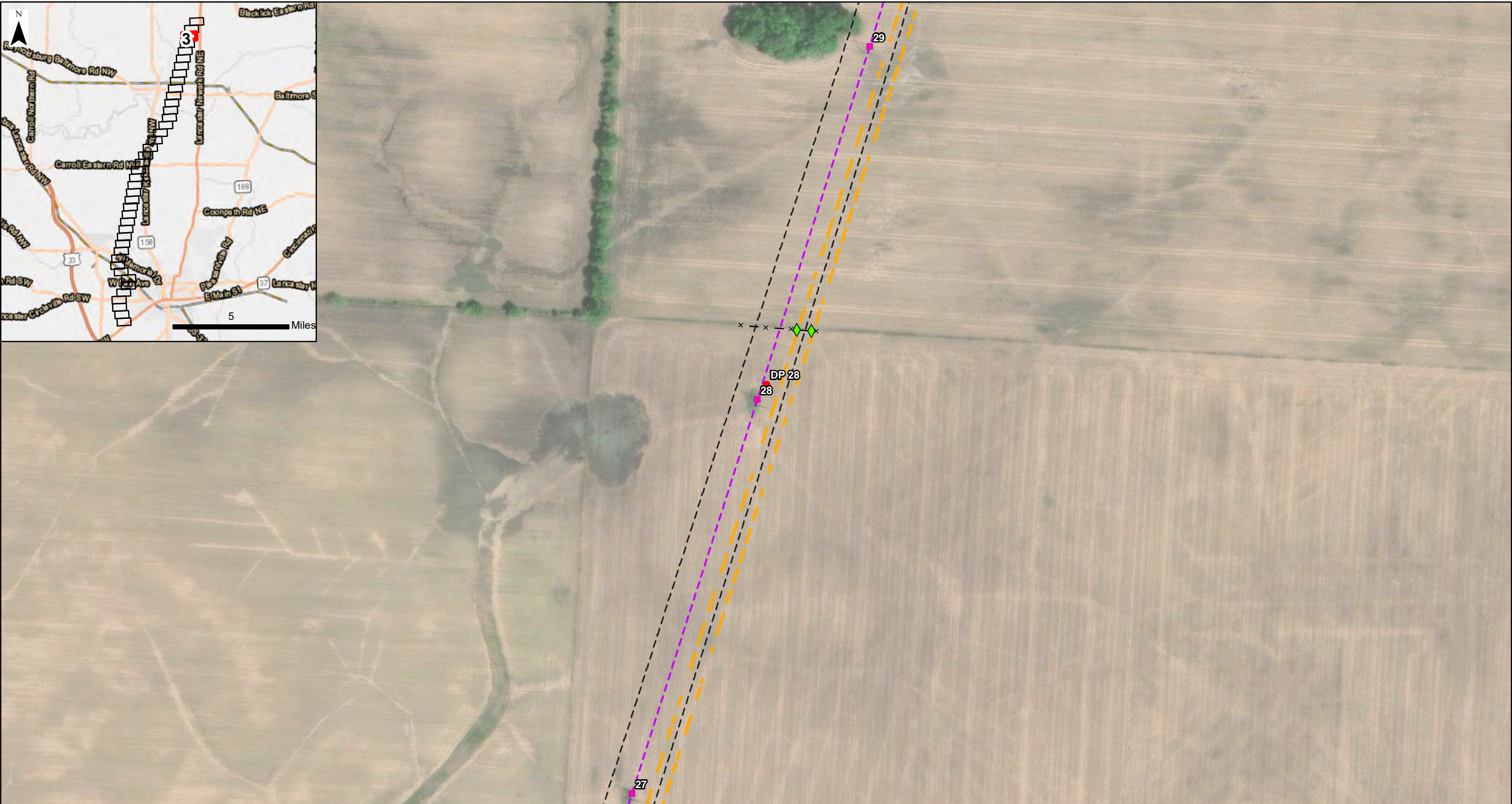
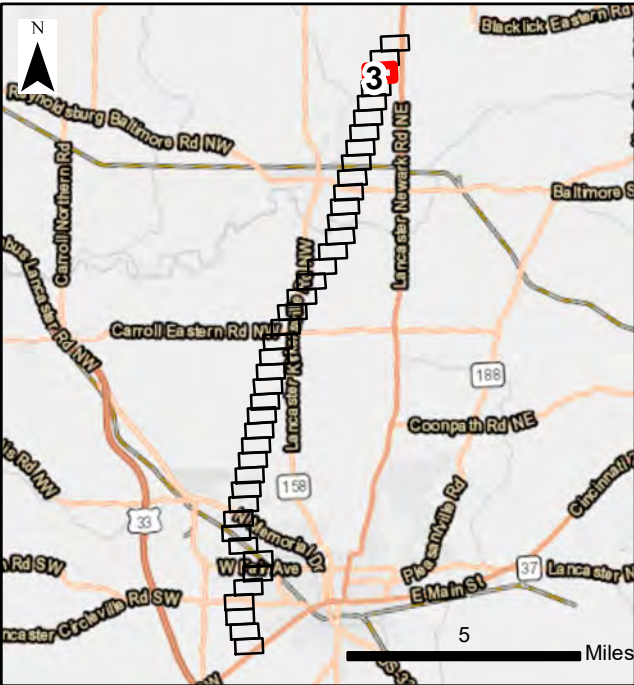






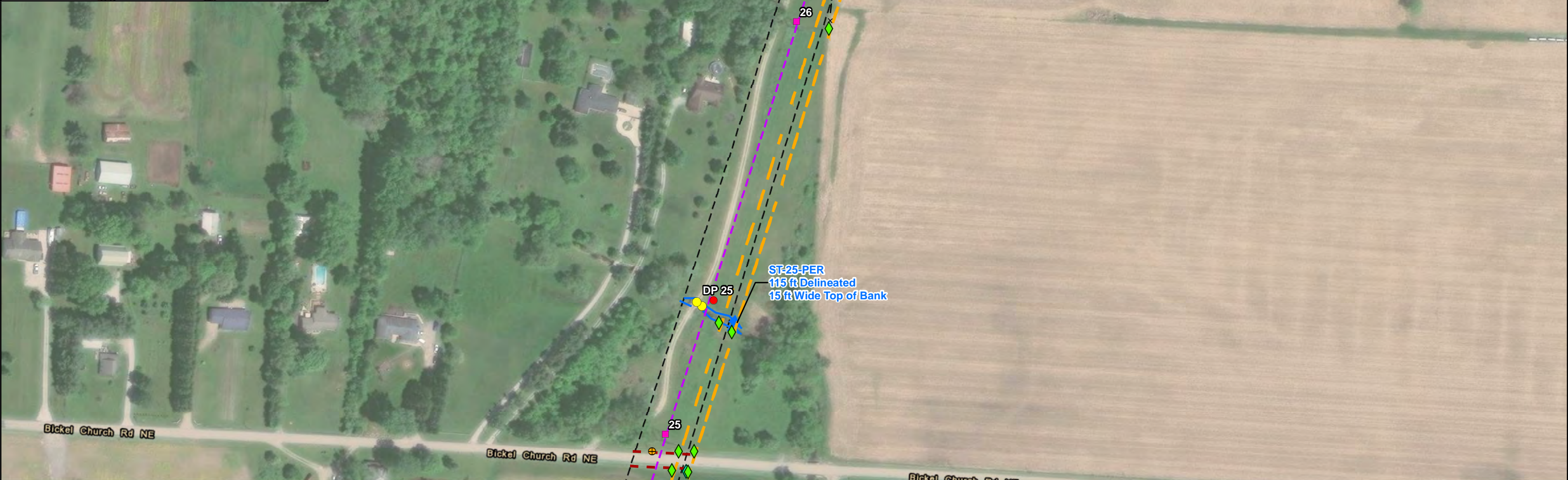
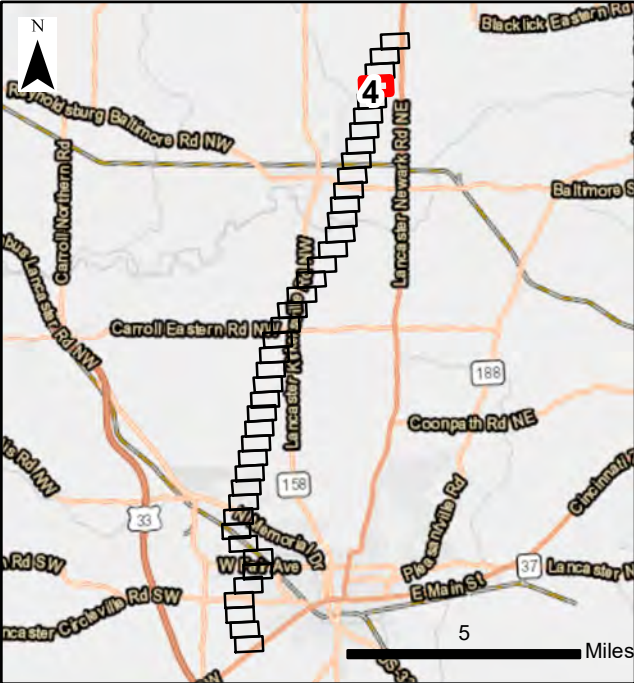






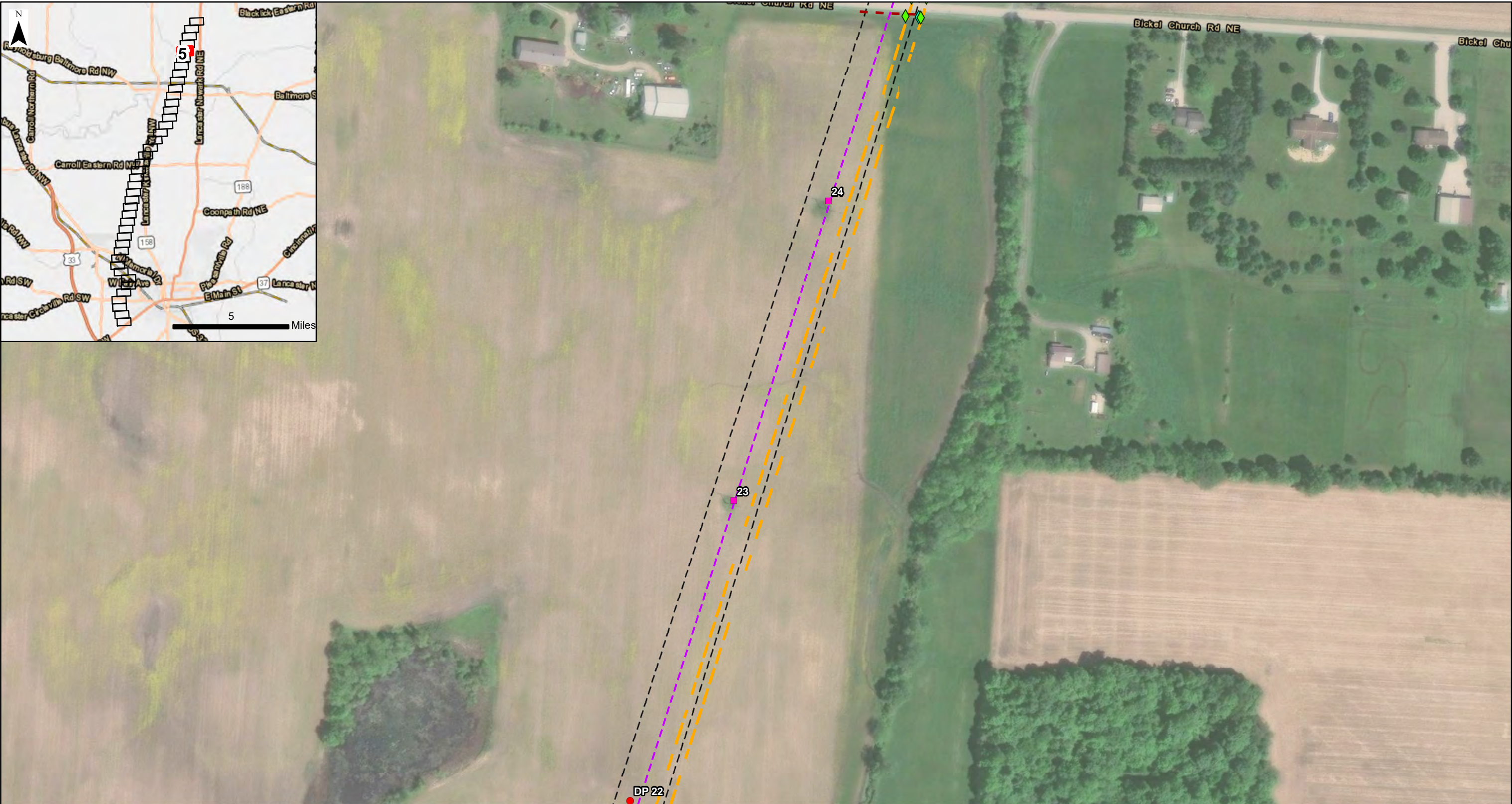
<div><div><div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div></div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div>■ Existing Structure</div><div>■ Existing Station</div><div>--- Existing Transmission Line</div><div>--- Proposed Transmission Line</div><div>[- - -] Environmental Study Area</div><div>⊕ Distribution Pole</div></div><div><div>■ Stormwater Inlet</div><div>◆ Existing Utility</div><div>◆ Potential Obstacle</div><div>● Existing Culvert</div><div>● Data Point</div><div>--- Topography</div></div><div><div>--- Swale</div><div>--- Roadside Ditch</div><div>--- Guardrail</div><div>× - × Existing Fence</div><div>--- Gas Line</div><div>+++ Railroad</div></div><div><div>→ Stream</div><div>■ Pond</div><div>■ Wetland PEM</div></div></div>	TITLE:	<div><div><div></div></div><div>0100200 Feet</div></div>	
	CREATED BY: ODS		SITE:		
<div><div><div><div>V3</div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div></div></div>	DATE: 04/28/2024		West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio		SCALE: 1:2,400
	BASE LAYER: Aerial Imagery (2022)				FIGURE: 4 Page 3 of 42





<div><div><div><div><div></div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div></div><div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div></div></div>	PROJECT NO.: 210180.182	LEGEND: <div><div><div>■ Existing Structure</div><div>■ Stormwater Inlet</div><div>— Swale</div><div>→ Stream</div></div><div><div>■ Existing Station</div><div>◆ Existing Utility</div><div>— Roadside Ditch</div><div>■ Pond</div></div><div><div>— Existing Transmission Line</div><div>◆ Potential Obstacle</div><div>— Guardrail</div><div>■ Wetland PEM</div></div><div><div>— Proposed Transmission Line</div><div>● Existing Culvert</div><div>× — × Existing Fence</div><div>— Gas Line</div></div><div><div>— Environmental Study Area</div><div>● Data Point</div><div>— Topography</div><div>+++ Railroad</div></div></div>						TITLE:  <div>DELINEATION MAP</div>		<div><div><div></div><div>0100200</div><div>Feet</div></div></div>
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<div><div><div><div><div></div><div>V3</div></div></div><div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div></div></div>	DATE: 04/28/2024							FIGURE: 4		
	BASE LAYER: Aerial Imagery (2022)							Page 4 of 42		





<div><div><div><div></div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div></div><div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div>■ Existing Structure</div><div>■ Existing Station</div><div>--- Existing Transmission Line</div><div>--- Proposed Transmission Line</div><div>--- Environmental Study Area</div><div>⦿ Distribution Pole</div></div><div><div>■ Stormwater Inlet</div><div>◆ Existing Utility</div><div>◆ Potential Obstacle</div><div>● Existing Culvert</div><div>● Data Point</div><div>--- Topography</div></div><div><div>--- Swale</div><div>--- Roadside Ditch</div><div>--- Guardrail</div><div>× -- × Existing Fence</div><div>--- Gas Line</div><div>+++ Railroad</div></div><div><div>→ Stream</div><div>■ Pond</div><div>■ Wetland PEM</div></div></div>	<div>TITLE:</div> <div>DELINEATION MAP</div>		<div><div><div></div><div>0100200</div><div>Feet</div></div><div>SCALE: 1:2,400</div><div>FIGURE: 4 Page 5 of 42</div></div>
	CREATED BY: ODS				
<div><div><div><div></div><div>V3</div></div></div><div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div></div>	DATE: 04/28/2024				
BASE LAYER: Aerial Imagery (2022)					





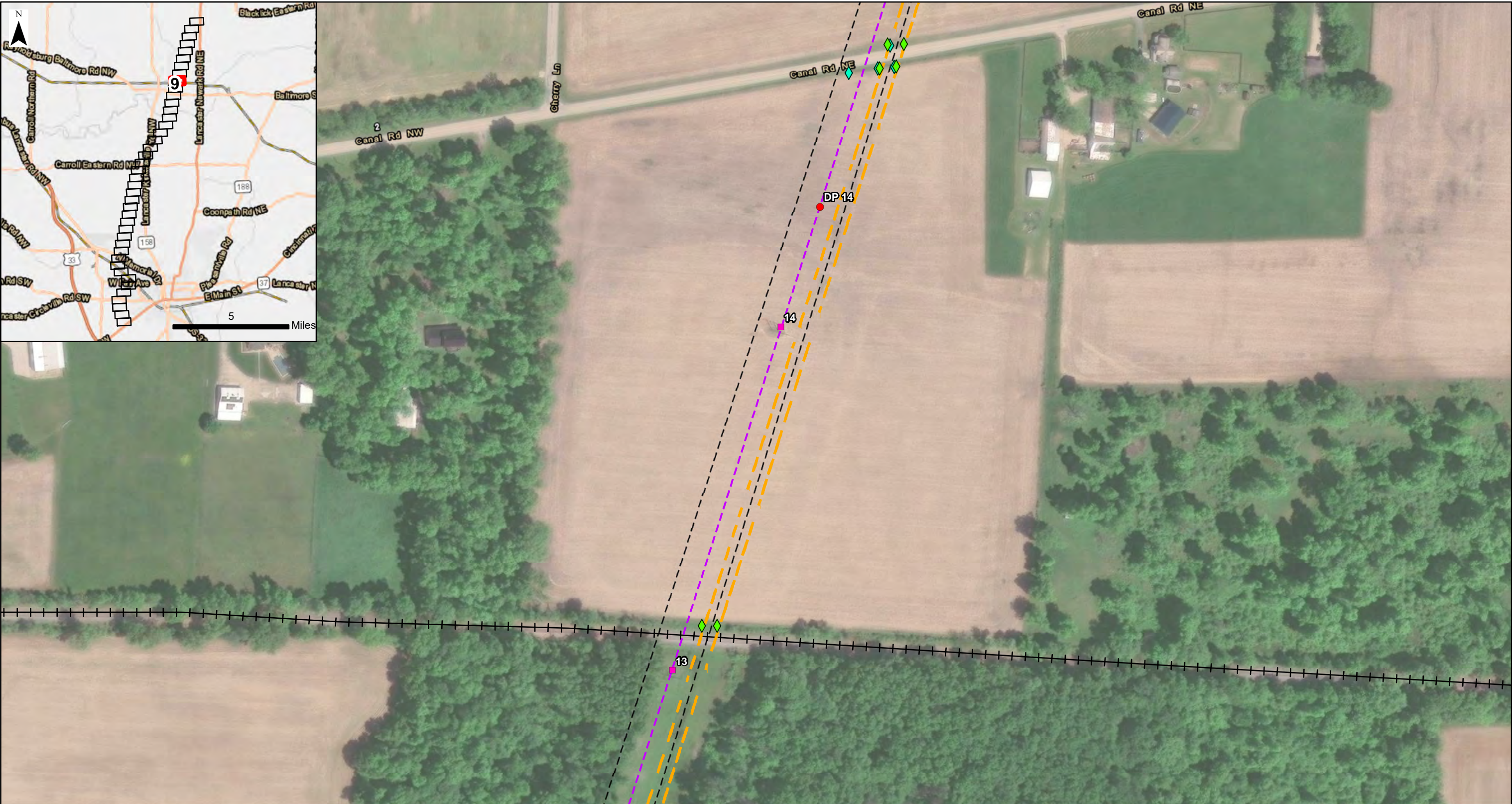












<div><div><div><div><div></div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div><div><div><div><div></div><div>V3</div></div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div></div></div></div>		PROJECT NO.: 210180.182		LEGEND:						TITLE:		<div><div><div><div></div><div></div><div></div></div><div>0100200 Feet</div></div></div>	
CREATED BY: ODS		DATE: 04/28/2024		Existing Structure		Existing Station		Existing Utility		Roadside Ditch		Pond	
				Existing Transmission Line		Potential Obstacle		Guardrail		Wetland PEM			
				Proposed Transmission Line		Existing Culvert		Existing Fence		Gas Line			
				Environmental Study Area		Data Point		Topography		Railroad			
				Distribution Pole									













<div><div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.: 210180.182	LEGEND: <div><div><div>Existing Structure</div><div>Existing Station</div><div>Existing Transmission Line</div><div>Proposed Transmission Line</div><div>Environmental Study Area</div><div>Distribution Pole</div></div><div><div>Stormwater Inlet</div><div>Existing Utility</div><div>Potential Obstacle</div><div>Existing Culvert</div><div>Data Point</div><div>Topography</div></div><div><div>Swale</div><div>Roadside Ditch</div><div>Guardrail</div><div>Existing Fence</div><div>Gas Line</div><div>Railroad</div></div><div><div>Stream</div><div>Pond</div><div>Wetland PEM</div></div></div>	TITLE: <div>DELINEATION MAP</div>		<div><div><div></div><div>0100200</div><div>Feet</div></div><div>SCALE: 1:2,400</div><div>FIGURE: 4</div><div>Page 12 of 42</div></div>
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<div><div><div>V3</div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div></div>					









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	CREATED BY: ODS		SITE:	
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	BASE LAYER: Aerial Imagery (2022)			

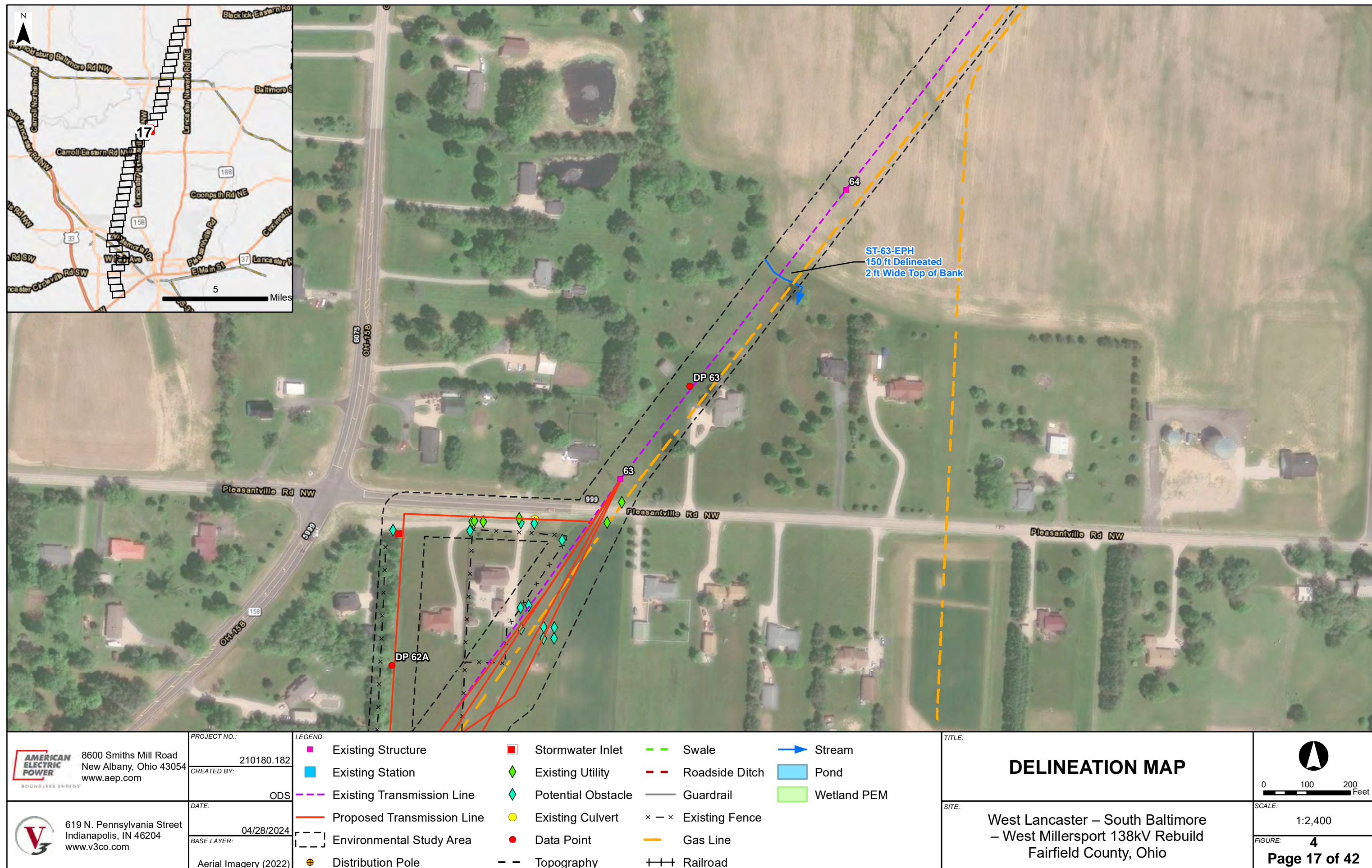




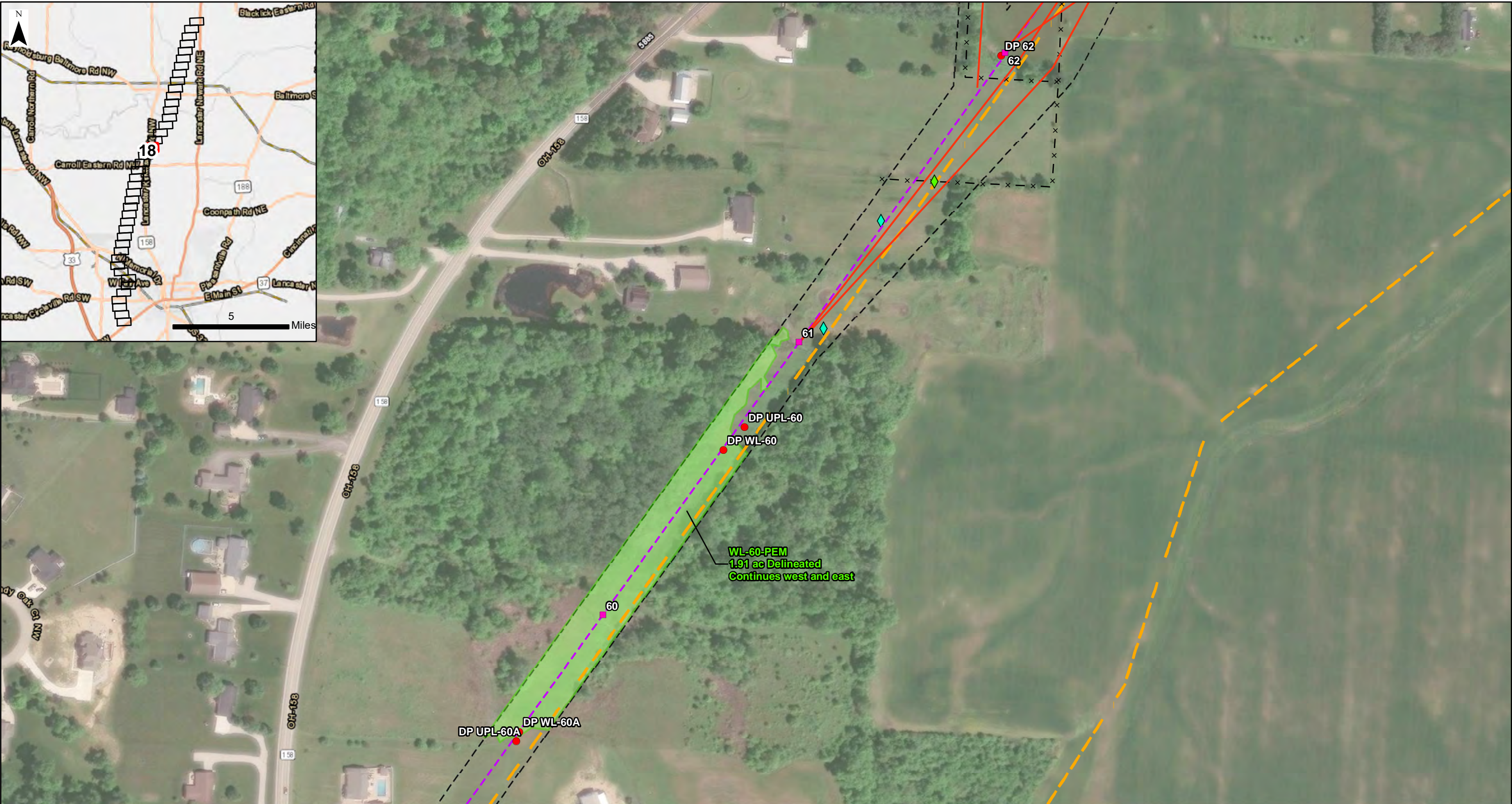















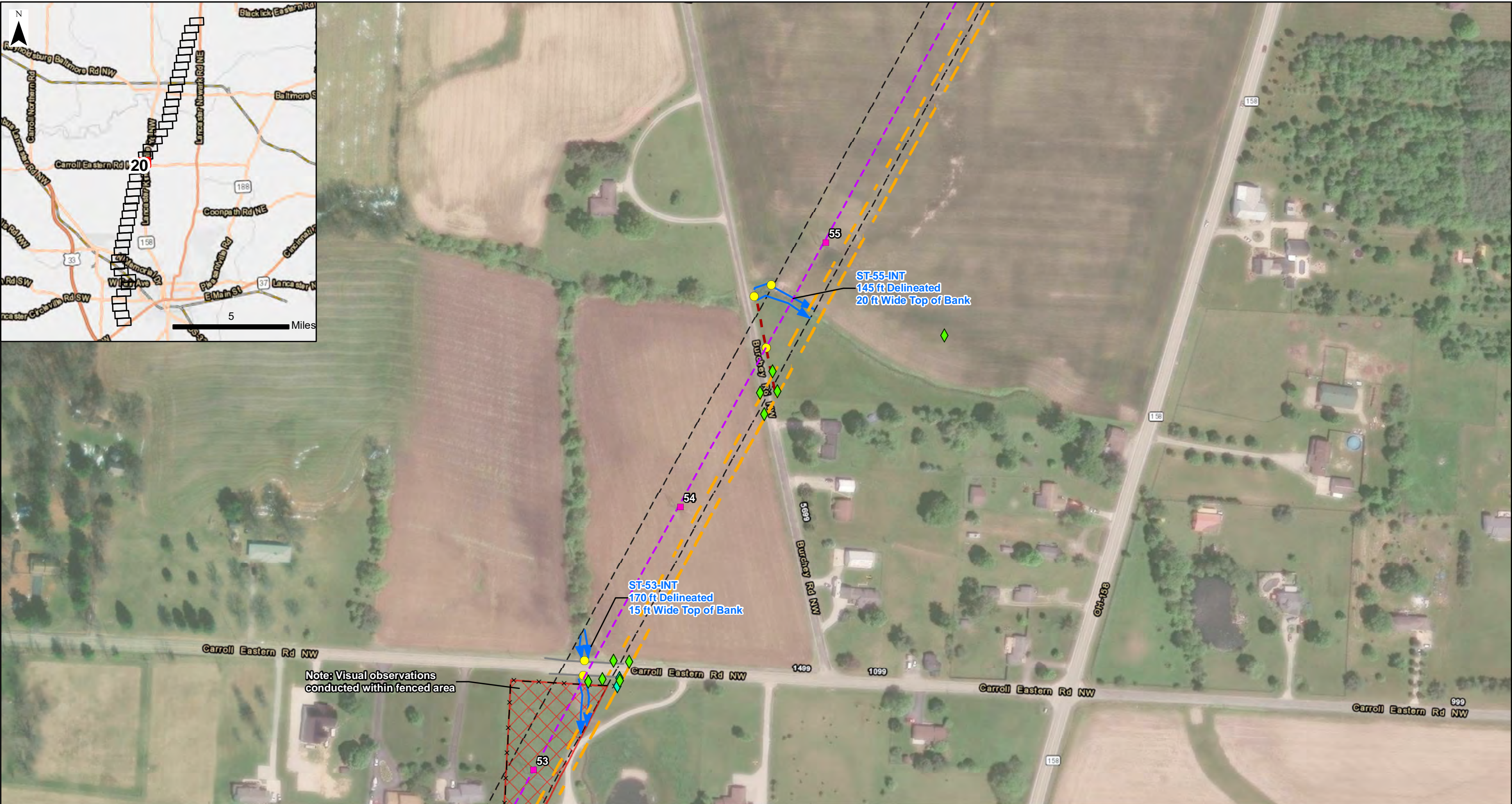
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 <div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div>	PROJECT NO.:	LEGEND:				TITLE:  <b>DELINEATION MAP</b>	
	CREATED BY:	210180.182	Existing Structure	Stormwater Inlet	Swale	Stream	
	ODS		Existing Station	Existing Utility	Roadside Ditch	Pond	
	DATE:	04/28/2024	Existing Transmission Line	Potential Obstacle	Guardrail	Wetland PEM	
 <div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div>	BASE LAYER:		Proposed Transmission Line	Existing Culvert	Existing Fence		SITE:  West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio
	Aerial Imagery (2022)		Environmental Study Area	Data Point	Gas Line		
			Distribution Pole	Topography	Railroad		
FIGURE: <b>4</b> Page 19 of 42							



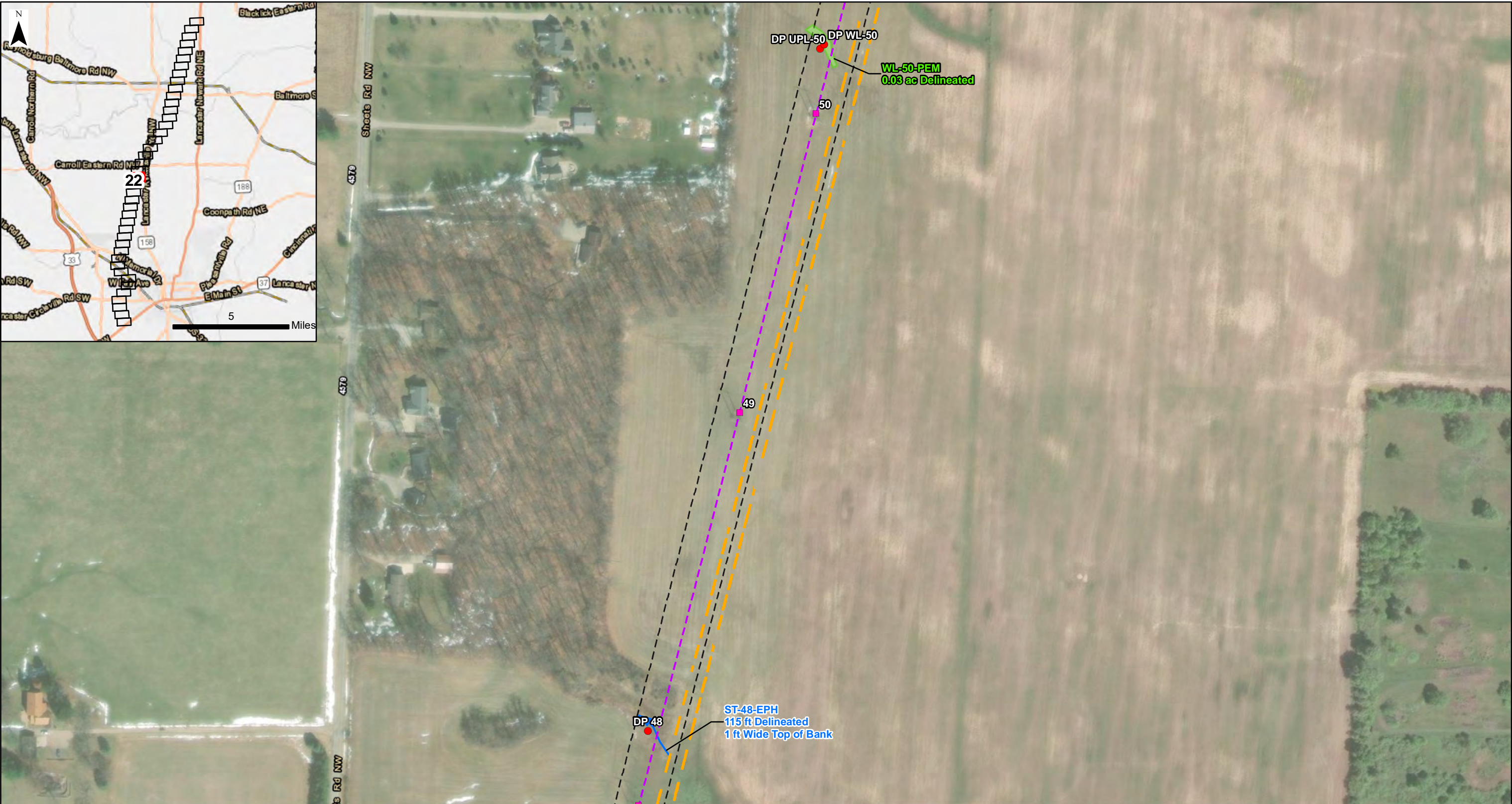


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	CREATED BY:	Existing Structure							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	DATE:	Existing Station						SITE:	SCALE:
	BASE LAYER:	Existing Transmission Line							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	PROJECT NO.:	Proposed Transmission Line						West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	FIGURE:
	CREATED BY:	Environmental Study Area							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	DATE:	Existing Culvert						Fairfield County, Ohio	4
	BASE LAYER:	Data Point							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	PROJECT NO.:	Stormwater Inlet						Fairfield County, Ohio	4
	CREATED BY:	Existing Utility							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	DATE:	Potential Obstacle						Fairfield County, Ohio	4
	BASE LAYER:	Guardrail							
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	CREATED BY:	Roadside Ditch							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	DATE:	Existing Fence						Fairfield County, Ohio	4
	BASE LAYER:	Gas Line							
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	CREATED BY:	Pond							
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	BASE LAYER:	Railroad							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	PROJECT NO.:	Topography						Fairfield County, Ohio	4
	CREATED BY:	Existing Structure							
<div><div><div></div><div>V</div><div>3</div></div><div><div>619 N. Pennsylvania Street</div><div>Indianapolis, IN 46204</div><div>www.v3co.com</div></div></div>	DATE:	Existing Station						Fairfield County, Ohio	4
	BASE LAYER:	Existing Transmission Line							









<div><div><div></div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.:	LEGEND:						TITLE:	<div><div></div><div>0100200</div><div>Feet</div></div>
	210180.182	Existing Structure	Stormwater Inlet	Swale	Stream				
<div><div><div></div><div>V3</div></div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div>	CREATED BY:	Existing Station	Existing Utility	Roadside Ditch	Pond				
	ODS	Existing Transmission Line	Potential Obstacle	Guardrail	Wetland PEM				
	DATE:	Proposed Transmission Line	Existing Culvert	Existing Fence					
	04/28/2024	Environmental Study Area	Data Point	Gas Line					
BASE LAYER:	Distribution Pole	Topography	Railroad						
	Aerial Imagery (2022)								
						West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio		SCALE:	1:2,400
								FIGURE:	4
								Page 22 of 42	









<div><div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div>■ Existing Structure</div><div>■ Existing Station</div><div>--- Existing Transmission Line</div><div>--- Proposed Transmission Line</div><div>[- -] Environmental Study Area</div><div>⦿ Distribution Pole</div></div><div><div>■ Stormwater Inlet</div><div>◆ Existing Utility</div><div>◆ Potential Obstacle</div><div>● Existing Culvert</div><div>● Data Point</div><div>- - Topography</div></div><div><div>--- Swale</div><div>--- Roadside Ditch</div><div>--- Guardrail</div><div>× - × Existing Fence</div><div>--- Gas Line</div><div>+++ Railroad</div></div><div><div>→ Stream</div><div>■ Pond</div><div>■ Wetland PEM</div></div></div>	TITLE:	<div><div>0100200</div><div>Feet</div></div>		
	CREATED BY: ODS					
<div><div><div>V3</div></div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div>	DATE: 04/28/2024			SITE:	<div>West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio</div>	SCALE: 1:2,400
	BASE LAYER: Aerial Imagery (2022)					FIGURE: 4





<div><div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div>Existing Structure</div><div>Existing Station</div><div>Existing Transmission Line</div><div>Proposed Transmission Line</div><div>Environmental Study Area</div><div>Distribution Pole</div></div><div><div>Stormwater Inlet</div><div>Existing Utility</div><div>Potential Obstacle</div><div>Existing Culvert</div><div>Data Point</div><div>Topography</div></div><div><div>Swale</div><div>Roadside Ditch</div><div>Guardrail</div><div>Existing Fence</div><div>Gas Line</div><div>Railroad</div></div><div><div>Stream</div><div>Pond</div><div>Wetland PEM</div></div></div>	TITLE: <b>DELINEATION MAP</b>	<div><div><div></div><div>0100200</div><div>Feet</div></div><div>SCALE: 1:2,400</div><div>FIGURE: <b>4</b> Page 25 of 42</div></div>
	CREATED BY: ODS		SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	DATE: 04/28/2024			
	BASE LAYER: Aerial Imagery (2022)			



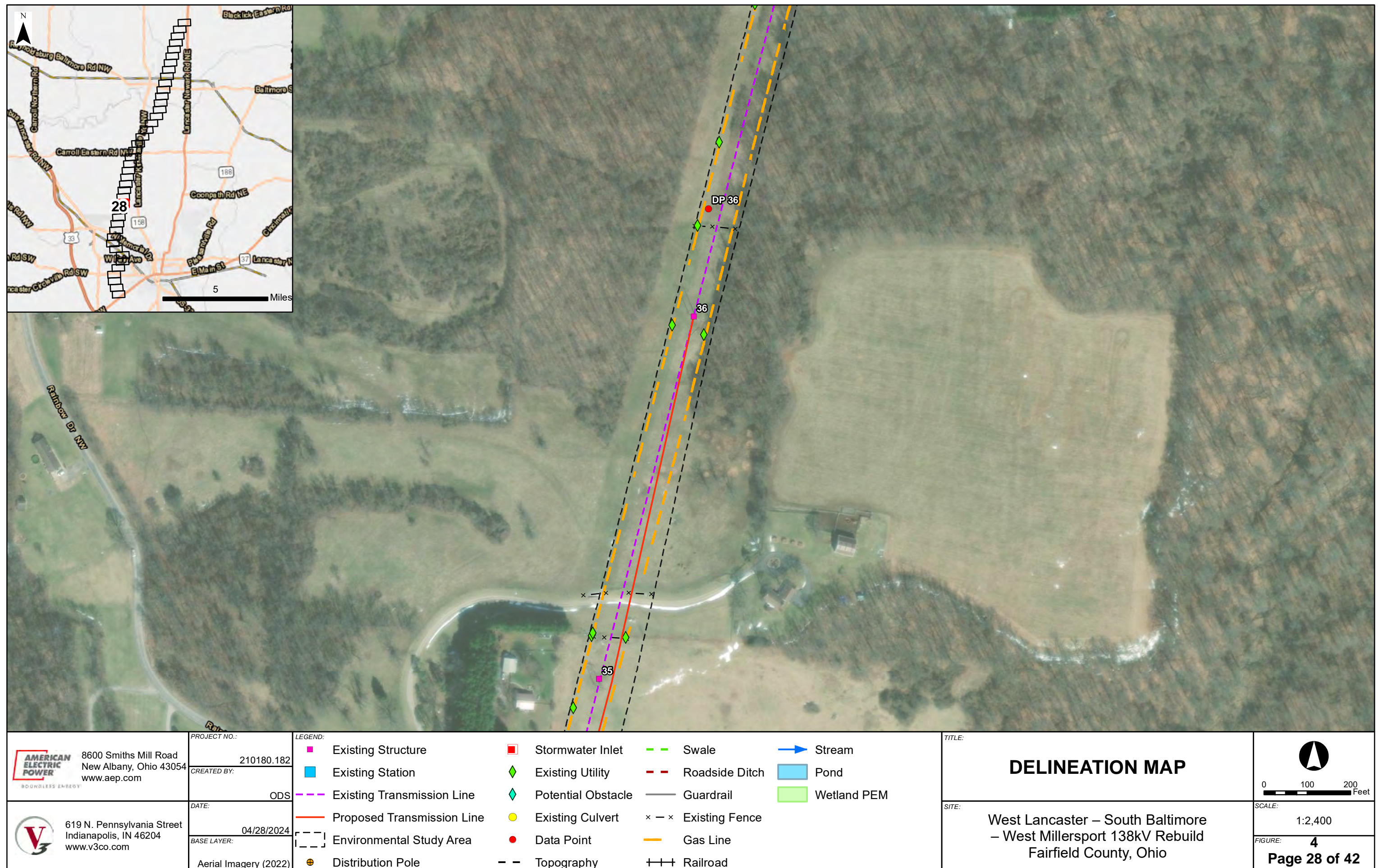


<div><div><div><div><div></div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div></div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div>■ Existing Structure</div><div>■ Stormwater Inlet</div><div>■ Existing Station</div><div>◆ Existing Utility</div><div>— Existing Transmission Line</div><div>— Proposed Transmission Line</div><div>— Environmental Study Area</div><div>⦿ Distribution Pole</div></div><div><div>■ Stormwater Inlet</div><div>◆ Existing Utility</div><div>◆ Potential Obstacle</div><div>● Existing Culvert</div><div>● Data Point</div><div>— Topography</div></div><div><div>— Swale</div><div>— Roadside Ditch</div><div>— Guardrail</div><div>× — × Existing Fence</div><div>— Gas Line</div><div>+++ Railroad</div></div><div><div>→ Stream</div><div>■ Pond</div><div>■ Wetland PEM</div></div></div>	TITLE:	<div><div><div></div><div>0100200</div><div>Feet</div></div><div>SCALE: 1:2,400</div><div>FIGURE: 4</div><div>Page 26 of 42</div></div>	
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<div><div><div><div><div></div><div>V3</div></div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div></div></div>	DATE: 04/28/2024			West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	BASE LAYER: Aerial Imagery (2022)				

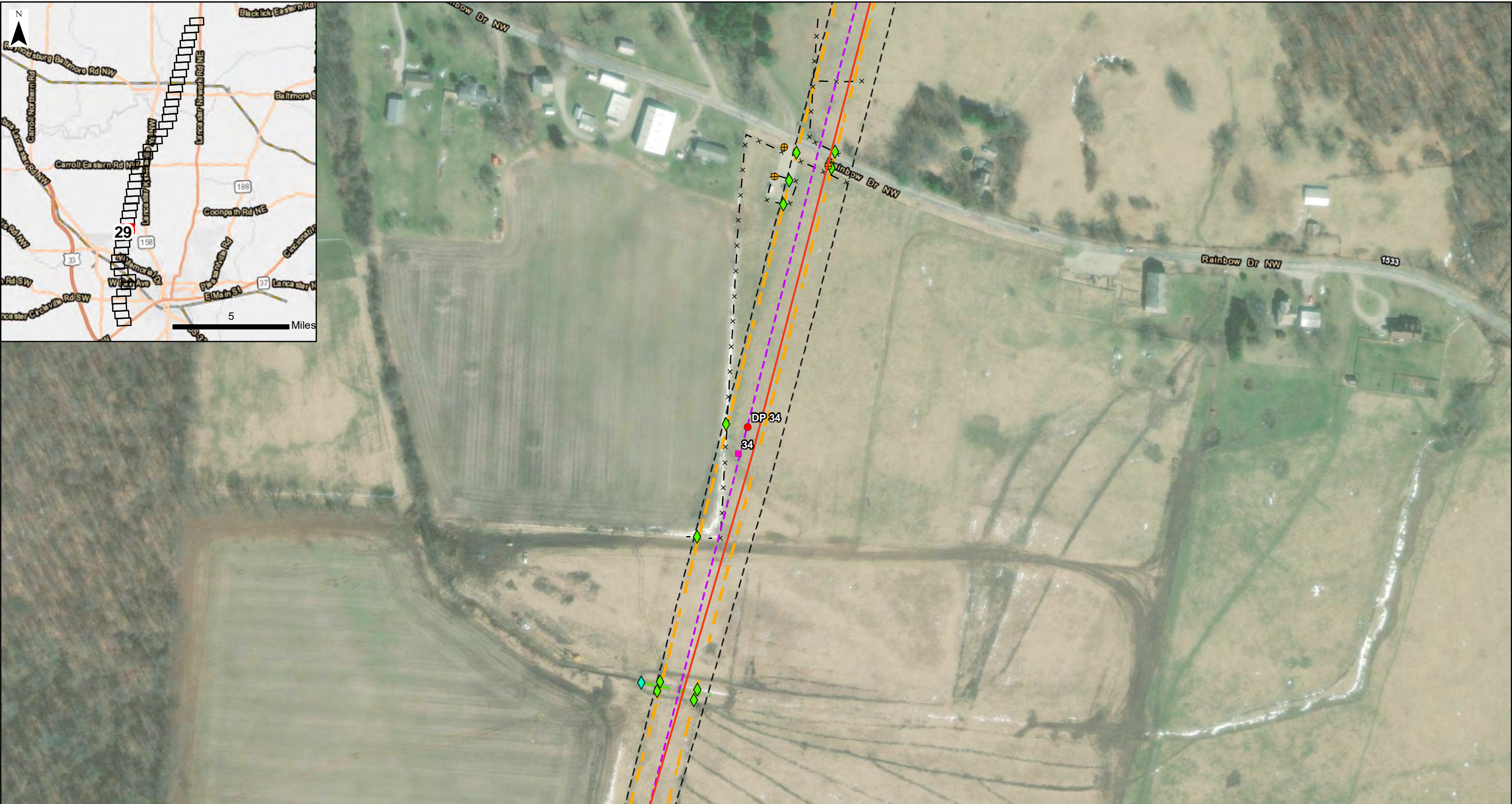












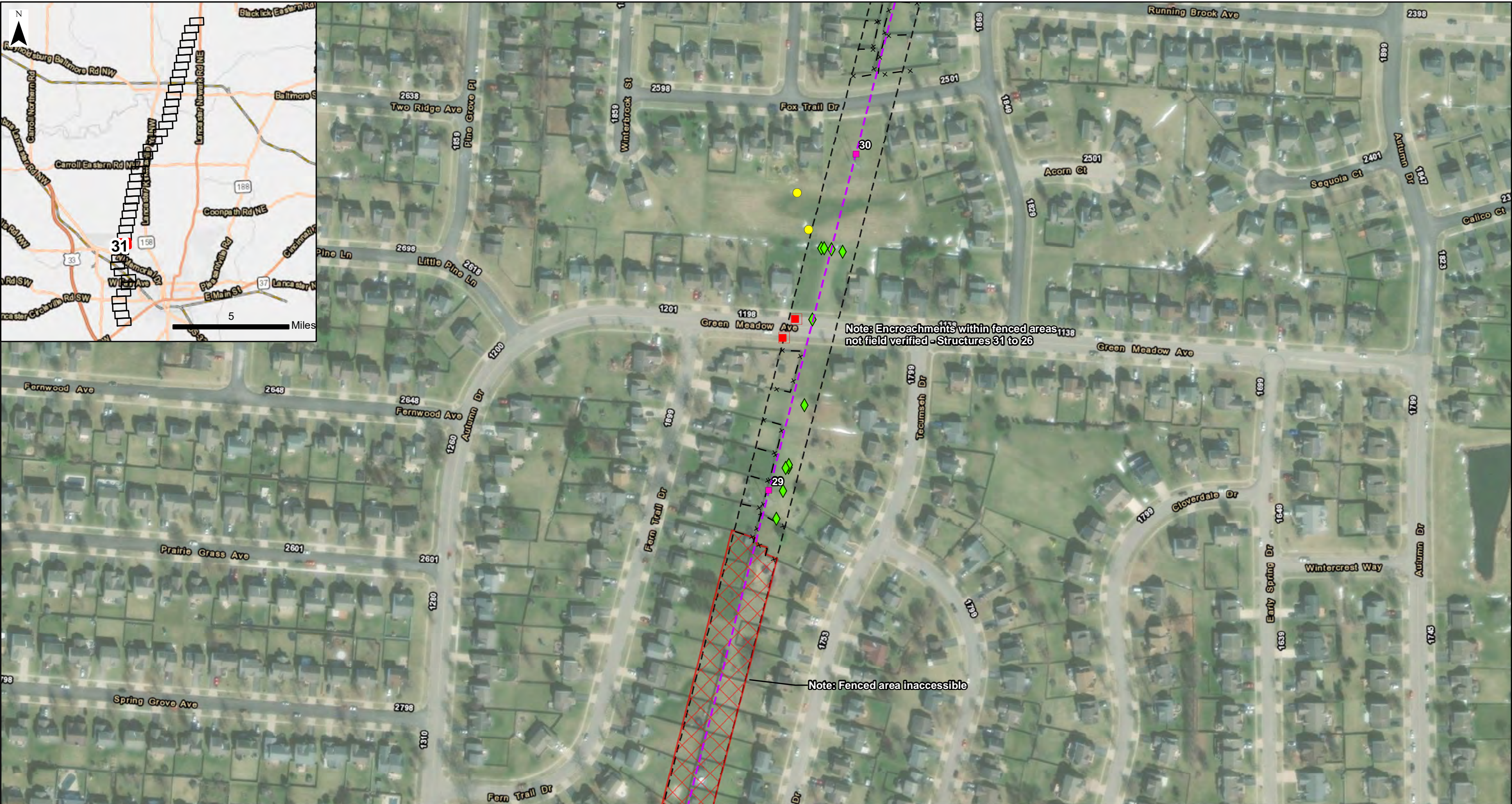
<div><div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.:	LEGEND:						TITLE:	<div><div></div><div>0100200</div><div>Feet</div></div>
	210180.182	■ Existing Structure							
	CREATED BY:	■ Existing Station						SITE:	West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio
	ODS	◇ Existing Utility							
	DATE:	◇ Potential Obstacle						SCALE:	1:2,400
	04/28/2024	— Existing Transmission Line							
	BASE LAYER:	— Proposed Transmission Line						FIGURE:	4
	Aerial Imagery (2022)	— Environmental Study Area							
		● Existing Culvert						Page 29 of 42	
		● Distribution Pole							
		— Topography							
		— Stormwater Inlet							
		— Swale							
		— Roadside Ditch							
		— Guardrail							
		— Gas Line							
		— Existing Fence							
		— Railroad							
		— Pond							
		— Wetland PEM							





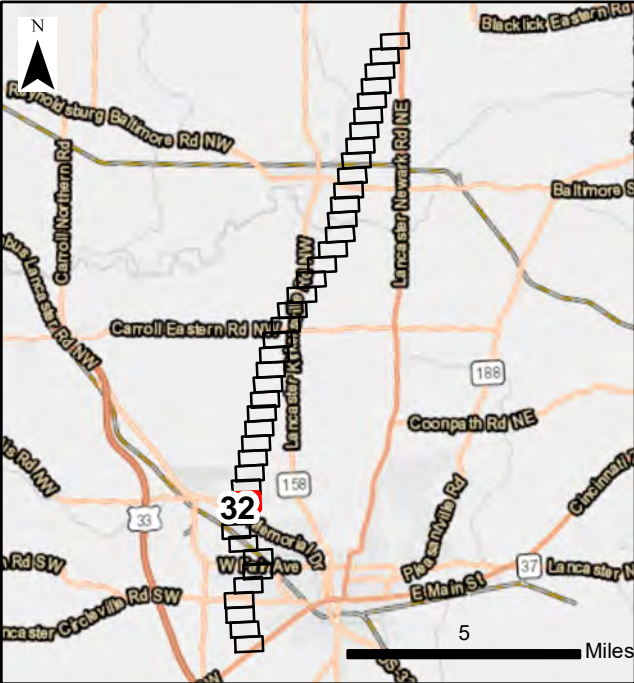
<div><div><div><div><div></div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div></div><div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div></div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div>Existing Structure</div><div>Existing Station</div><div>Existing Transmission Line</div><div>Proposed Transmission Line</div><div>Environmental Study Area</div><div>Distribution Pole</div></div><div><div>Stormwater Inlet</div><div>Existing Utility</div><div>Potential Obstacle</div><div>Existing Culvert</div><div>Data Point</div><div>Topography</div></div><div><div>Swale</div><div>Roadside Ditch</div><div>Guardrail</div><div>Existing Fence</div><div>Gas Line</div><div>Railroad</div></div><div><div>Stream</div><div>Pond</div><div>Wetland PEM</div></div></div>	TITLE: <b>DELINEATION MAP</b>	<div><div><div></div><div>0100200</div><div>Feet</div></div><div>SCALE: 1:2,400</div><div>FIGURE: 4</div><div>Page 30 of 42</div></div>
	CREATED BY: ODS		SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	DATE: 04/28/2024			
	BASE LAYER: Aerial Imagery (2022)			





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	CREATED BY: ODS		SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	DATE: 04/28/2024			
	BASE LAYER: Aerial Imagery (2022)			





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	CREATED BY: ODS		SITE: West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio	
	DATE: 04/28/2024			
	BASE LAYER: Aerial Imagery (2022)			

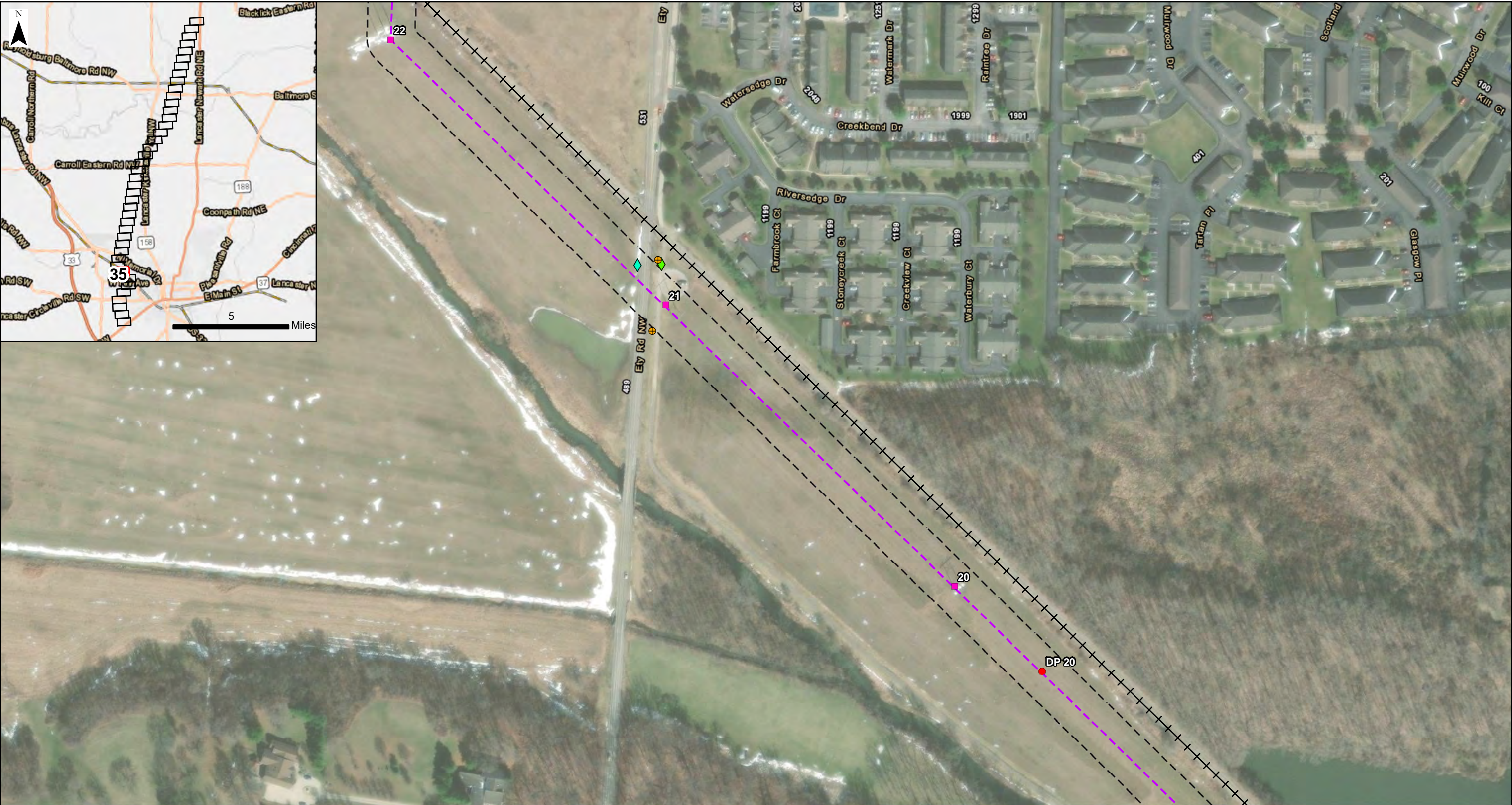












<div><div><div>AMERICAN ELECTRIC POWER</div><div>BOUNDLESS ENERGY</div></div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.:	LEGEND:						TITLE:	<div><div><div><div></div></div><div>0100200 Feet</div></div></div>
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<div><div><div>V3</div></div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div>	DATE:	SCALE:							
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Aerial Imagery (2022)		FIGURE: 4							
		Page 35 of 42							













 8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com	PROJECT NO.: 210180.182	<b>LEGEND:</b> <div><div><div>■</div> Existing Structure</div><div><div>■</div> Existing Station</div><div><div>---</div> Existing Transmission Line</div><div><div>---</div> Proposed Transmission Line</div><div><div>---</div> Environmental Study Area</div><div><div>●</div> Distribution Pole</div></div> <div><div>■</div> Stormwater Inlet</div> <div><div>◆</div> Existing Utility</div> <div><div>◆</div> Potential Obstacle</div> <div><div>●</div> Existing Culvert</div> <div><div>●</div> Data Point</div> <div><div>---</div> Topography</div>
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 Swale

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 Existing Fence

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<div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.: 210180.182	<div>LEGEND:</div> <div><div><div><div>■</div>Existing Structure</div><div><div>■</div>Existing Station</div><div><div>---</div>Existing Transmission Line</div><div><div>---</div>Proposed Transmission Line</div><div><div>---</div>Environmental Study Area</div><div><div>●</div>Distribution Pole</div></div><div><div><div>■</div>Stormwater Inlet</div><div><div>◆</div>Existing Utility</div><div><div>◆</div>Potential Obstacle</div><div><div>●</div>Existing Culvert</div><div><div>●</div>Data Point</div><div><div>---</div>Topography</div></div><div><div><div>---</div>Swale</div><div><div>---</div>Roadside Ditch</div><div><div>---</div>Guardrail</div><div><div>× - ×</div>Existing Fence</div><div><div>---</div>Gas Line</div><div><div>+++</div>Railroad</div></div><div><div><div>→</div>Stream</div><div><div>■</div>Pond</div><div><div>■</div>Wetland PEM</div></div></div>
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619 N. Pennsylvania Street  
Indianapolis, IN 46204  
www.v3co.com









<div><div>8600 Smiths Mill Road New Albany, Ohio 43054 www.aep.com</div></div>	PROJECT NO.:	LEGEND:						TITLE:	<div> 0 100 200 Feet</div>
	210180.182	CREATED BY:	<div> Existing Structure</div> <div> Existing Station</div> <div> Existing Transmission Line</div> <div> Proposed Transmission Line</div> <div> Environmental Study Area</div> <div> Distribution Pole</div>	<div> Stormwater Inlet</div> <div> Existing Utility</div> <div> Potential Obstacle</div> <div> Existing Culvert</div> <div> Data Point</div> <div> Topography</div>	<div> Swale</div> <div> Roadside Ditch</div> <div> Guardrail</div> <div> Existing Fence</div> <div> Gas Line</div> <div> Railroad</div>	<div> Stream</div> <div> Pond</div> <div> Wetland PEM</div>			
<div><div>619 N. Pennsylvania Street Indianapolis, IN 46204 www.v3co.com</div></div>	DATE:							SITE:	West Lancaster – South Baltimore – West Millersport 138kV Rebuild Fairfield County, Ohio
	04/28/2024								
	BASE LAYER:	Aerial Imagery (2022)						SCALE:	1:2,400
								FIGURE:	4
								Page 41 of 42	





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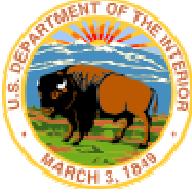


## Appendix A

*ETR Species Correspondence Letters*







## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

03/18/2024 20:18:46 UTC

Project Code: 2024-0064491

Project Name: West Lancaster – South Baltimore – West Millersport 138kV Rebuild

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological



evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.



Attachment(s):

- Official Species List

## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

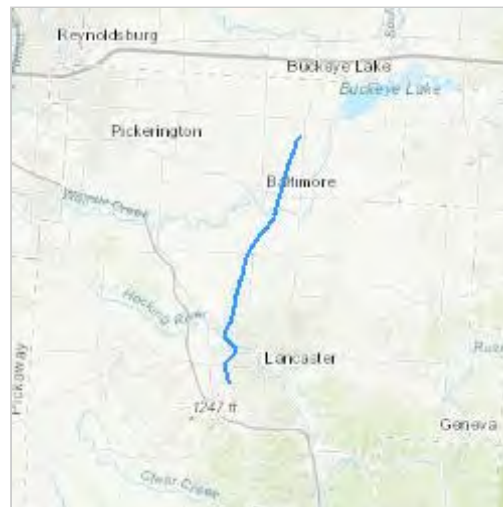


## PROJECT SUMMARY

Project Code: 2024-0064491  
Project Name: West Lancaster – South Baltimore – West Millersport 138kV Rebuild  
Project Type: Transmission Line - Maintenance/Modification - Above Ground  
Project Description: AEP proposes to rebuild the West Lancaster – South Baltimore – West Millersport 138kV Transmission Line located in Liberty, Walnut, Greenfield, and Pleasant Township, Fairfield County Ohio. The project involves rebuilding approximately 14.4 miles of the West Lancaster – South Baltimore – West Millersport 138 kV Transmission Lines.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.7632933,-82.63181485815679,14z>



Counties: Fairfield County, Ohio



## ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.



## MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

## REPTILES

NAME	STATUS
Eastern Massasauga (=rattlesnake) <i>Sistrurus catenatus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2202">https://ecos.fws.gov/ecp/species/2202</a>	Threatened

## CLAMS

NAME	STATUS
Round Hickorynut <i>Obovaria subrotunda</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9879">https://ecos.fws.gov/ecp/species/9879</a>	Threatened
Salamander Mussel <i>Simpsonaias ambigua</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6208">https://ecos.fws.gov/ecp/species/6208</a>	Proposed Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

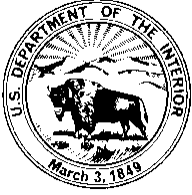


## **IPAC USER CONTACT INFORMATION**

Agency: V3 Companies  
Name: Olivia Speckman  
Address: 619 N Pennsylvania Street  
City: Indianapolis  
State: IN  
Zip: 46204  
Email: ospeckman@v3co.com  
Phone: 3174230690



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994



April 17, 2024

Project Code: 2024-0064491

Dear Olivia Speckman:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees  $\geq 3$  inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees  $\geq 3$  inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees  $\geq 3$  inches dbh cannot be avoided, we recommend removal of any trees  $\geq 3$  inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.



Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio ([https://epa.ohio.gov/portals/47/facts/ohio\\_wetlands.pdf](https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf)). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at [mike.pettegrew@dnr.ohio.gov](mailto:mike.pettegrew@dnr.ohio.gov).



If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Erin Knoll".

Erin Knoll  
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW  
Eileen Wyza, ODNR-DOW





# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

## Office of Real Estate

Tara Paciorek, Chief

2045 Morse Road – Bldg. E-2

Columbus, Ohio 43229

Phone: (614) 265-6661

Fax: (614) 267-4764

April 26, 2024

Olivia Speckman  
V3 Companies  
619 North Pennsylvania Street  
Indianapolis, Indiana 46204

**Re:** 24-0500\_West Lancaster - South Baltimore - West Millersport 138kV Rebuild

**Project:** The proposed project involves rebuilding approximately 14.4 miles of the West Lancaster – South Baltimore – West Millersport 138 kV Transmission Lines.

**Location:** The proposed project is located in Liberty, Walnut, Greenfield, and Pleasant townships, Fairfield County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has the following data within one mile of the project area:

Cerulean Warbler (*Setophaga cerulea*), SC  
Kidneyshell (*Ptychobranchius fasciolaris*), SC  
Great Blue Heron Rookery  
Appalachian oak forest plant community  
Oak-maple forest plant community

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. Records for high quality plant communities indicate the presence of sites that are in our inventory of the best remaining examples of Ohio's pre-settlement ecosystems.

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.



The species and features listed above are not recorded within the boundaries of the specified project area. However, please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at [Eileen.Wyza@dnr.ohio.gov](mailto:Eileen.Wyza@dnr.ohio.gov)).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH  $\geq$  20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#).” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2022), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional



malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the [Ohio Mussel Survey Protocol](#). If there is no in-water work proposed, impacts to mussels are not likely.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, and the popeye shiner (*Notropis ariommus*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the northern harrier (*Circus hudsonius*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

**Water Resources:** The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at [mike.pettegrew@dnr.ohio.gov](mailto:mike.pettegrew@dnr.ohio.gov) if you have questions about these comments or need additional information.

Mike Pettegrew  
Environmental Services Administrator



## Appendix B

*SITE Photographs*





**Photo: 1**

WL-12-PEM

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 2**

WL-12-PEM

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 3**

WL-12-PEM

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 4**

WL-12-PEM

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 5**

DP UPL-12

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 6**

DP UPL-12

**Direction of View:**

West

**Date:**

27 March 2024





**Photo: 7**

WL-10-PEM

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 8**

WL-10-PEM

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 9**

WL-10-PEM

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 10**

WL-10-PEM

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 11**

DP UPL-10

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 12**

DP UPL-10

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 13**

WL-5-PEM

**Direction of View:**

Northeast

**Date:**

27 March 2024



**Photo: 14**

WL-5-PEM

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 18**

WL-5-PEM

**Direction of View:**

Southwest

**Date:**

27 March 2024





**Photo: 16**

WL-5-PEM

**Direction of View:**

West

**Date:**

28 March 2024



**Photo: 17**

DP UPL-5

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 18**

WL-68-PEM

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 19**

WL-68-PEM

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 20**

WL-68-PEM

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 21**

WL-68-PEM

**Direction of View:**

West

**Date:**

27 March 2024





**Photo: 22**

DP UPL-68

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 23**

DP UPL-68

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 24**

WL-60-PEM

DP WL-60

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 25**

WL-60-PEM

DP WL-60

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 26**

WL-60-PEM

DP WL-60

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 27**

WL-60-PEM

DP WL-60

**Direction of View:**

West

**Date:**

27 March 2024





**Photo: 28**

DP UPL-60

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 29**

DP UPL-60

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 30**

WL-60-PEM

DP WL-60-A

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 31**

WL-60-PEM  
DP WL-60-A

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 32**

WL-60-PEM  
DP WL-60-A

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 33**

WL-60-PEM  
DP WL-60-A

**Direction of View:**

West

**Date:**

27 March 2024





**Photo: 34**

DP UPL-60-A

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 35**

WL-50-PEM

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 36**

WL-50-PEM

**Direction of View:**

East

**Date:**

27 March 2024





**Photo: 37**

WL-50-PEM

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 38**

WL-50-PEM

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 39**

DP UPL-50

**Direction of View:**

East

**Date:**

27 March 2024





**Photo: 40**

DP UPL-50

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 41**

WL-41-PEM

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 42**

WL-41-PEM

**Direction of View:**

East

**Date:**

27 March 2024





**Photo: 43**

WL-41-PEM

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 44**

WL-41-PEM

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 45**

DP UPL-41

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 46**

DP UPL-41

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 47**

WL-18-PEM

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 48**

WL-18-PEM

**Direction of View:**

East

**Date:**

28 March 2024





**Photo: 49**

WL-18-PEM

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 50**

WL-18-PEM

**Direction of View:**

West

**Date:**

28 March 2024



**Photo: 51**

DP UPL-18

**Direction of View:**

East

**Date:**

28 March 2024





**Photo: 52**

DP UPL-18

**Direction of View:**

West

**Date:**

28 March 2024



**Photo: 53**

DP 33A

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 54**

DP 33A

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 55**

DP 33

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 56**

DP 33

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 57**

DP 31

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 58**

DP 31

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 59**

DP 28

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 60**

DP 28

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 61**

DP 25

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 62**

DP 25

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 63**

DP 22

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 64**

DP 22

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 65**

DP 19

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 66**

DP 19

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 67**

DP 16

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 68**

DP 16

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 69**

DP 14

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 70**

DP 14

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 71**

DP 12

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 72**

DP 12

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 73**

DP 10

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 74**

DP 10

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 75**

DP 8

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 76**

DP 8

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 77**

DP 6

**Direction of View:**

Northeast

**Date:**

27 March 2024



**Photo: 78**

DP 6

**Direction of View:**

Southwest

**Date:**

27 March 2024





**Photo: 79**

DP 4

**Direction of View:**

Northeast

**Date:**

27 March 2024



**Photo: 80**

DP 4

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 81**

DP 4A

**Direction of View:**

Northeast

**Date:**

27 March 2024





**Photo: 82**

DP 4A

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 83**

DP 3

**Direction of View:**

Northeast

**Date:**

27 March 2024



**Photo: 84**

DP 3

**Direction of View:**

Southwest

**Date:**

27 March 2024





**Photo: 85**

DP 2

**Direction of View:**

Northeast

**Date:**

27 March 2024



**Photo: 86**

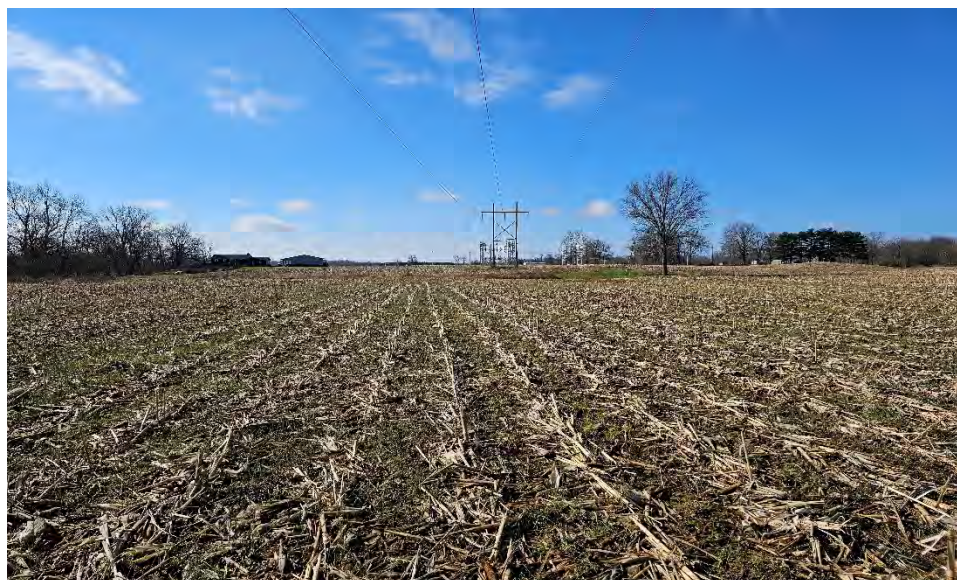
DP 2

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 87**

DP 71

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 88**

DP 71

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 89**

DP 70

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 90**

DP 70

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 91**

DP 68

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 92**

DP 68

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 93**

DP 63

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 94**

DP 63

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 95**

DP 62A

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 96**

DP 62A

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 97**

DP 62

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 98**

DP 62

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 99**

DP 59

**Direction of View:**

Northeast

**Date:**

27 March 2024





**Photo: 100**

DP 59

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 101**

DP 57

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 102**

DP 57

**Direction of View:**

Southwest

**Date:**

27 March 2024





**Photo: 103**

DP 52

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 104**

DP 52

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 105**

DP 51

**Direction of View:**

Northwest

**Date:**

27 March 2024





**Photo: 106**

DP 51

**Direction of View:**

Southeast

**Date:**

27 March 2024



**Photo: 107**

DP 48

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 108**

DP 48

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 109**

DP 46

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 110**

DP 46

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 111**

DP 44

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 112**

DP 44

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 113**

DP 42

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 114**

DP 42

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 115**

DP 41

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 116**

DP 41

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 117**

DP 40

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 118**

DP 40

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 119**

DP 39

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 120**

DP 39

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 121**

DP 36

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 122**

DP 36

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 123**

DP 34

**Direction of View:**

North

**Date:**

28 March 2024





**Photo: 124**

DP 34

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 125**

DP 32

**Direction of View:**

Northeast

**Date:**

28 March 2024



**Photo: 126**

DP 32

**Direction of View:**

West

**Date:**

28 March 2024





**Photo: 127**

DP 31A

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 128**

DP 31A

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 129**

DP 26

**Direction of View:**

North

**Date:**

28 March 2024





**Photo: 130**

DP 26

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 131**

DP 23

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 132**

DP 23

**Direction of View:**

South

**Date:**

28 March 2024





**Photo: 133**

DP 22

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 134**

DP 22

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 135**

DP 20

**Direction of View:**

Northwest

**Date:**

28 March 2024





**Photo: 136**

DP 20

**Direction of View:**

Southeast

**Date:**

28 March 2024



**Photo: 137**

DP 15

**Direction of View:**

Northeast

**Date:**

28 March 2024



**Photo: 138**

DP 15

**Direction of View:**

South

**Date:**

28 March 2024





**Photo: 139**

DP 13

**Direction of View:**

Northeast

**Date:**

28 March 2024



**Photo: 140**

DP 13

**Direction of View:**

Southwest

**Date:**

28 March 2024



**Photo: 141**

DP 11

**Direction of View:**

North

**Date:**

28 March 2024





**Photo: 142**

DP 11

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 143**

DP 8A

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 144**

DP 8A

**Direction of View:**

South

**Date:**

28 March 2024





**Photo: 145**

DP 7

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 146**

DP 7

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 147**

DP 5A

**Direction of View:**

North

**Date:**

28 March 2024





**Photo: 148**

DP 5A

**Direction of View:**

South

**Date:**

28 March 2024



**Photo: 149**

DP 3A

**Direction of View:**

North

**Date:**

28 March 2024



**Photo: 150**

DP 3A

**Direction of View:**

South

**Date:**

28 March 2024





**Photo: 151**

DP 1A

**Direction of View:**

East

**Date:**

28 March 2024



**Photo: 152**

DP 1A

**Direction of View:**

West

**Date:**

28 March 2024



**Photo: 153**

DP 1

**Direction of View:**

East

**Date:**

28 March 2024





**Photo: 154**

DP 1

**Direction of View:**

West

**Date:**

28 March 2024



**Photo: 155**

ST-31-PER

**Direction of View:**

North

**Date:**

27 March 2024



**Photo: 156**

ST-31-PER

**Direction of View:**

South

**Date:**

27 March 2024





**Photo: 157**

ST-25-PER

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 158**

ST-25-PER

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 159**

ST-15-PER

**Direction of View:**

East

**Date:**

27 March 2024





**Photo: 160**

ST-15-PER

**Direction of View:**

Southwest

**Date:**

27 March 2024



**Photo: 161**

Walnut Creek

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 162**

Walnut Creek

**Direction of View:**

West

**Date:**

27 March 2024





**Photo: 163**

ST-2-PER

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 164**

ST-2-PER

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 165**

ST-68-INT

**Direction of View:**

East

**Date:**

27 March 2024





**Photo: 166**

ST-68-INT

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 167**

ST-63-EPH

**Direction of View:**

Northeast

**Date:**

27 March 2024



**Photo: 168**

ST-63-EPH

**Direction of View:**

Southwest

**Date:**

27 March 2024





**Photo: 169**

ST-55-INT

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 170**

ST-55-INT

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 171**

ST-53-INT

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 172**

ST-53-INT

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 173**

ST-48-EPH

**Direction of View:**

Northwest

**Date:**

27 March 2024



**Photo: 174**

ST-48-EPH

**Direction of View:**

Southeast

**Date:**

27 March 2024





**Photo: 175**

ST-44-INT

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 176**

ST-44-INT

**Direction of View:**

West

**Date:**

27 March 2024



**Photo: 177**

ST-44-EPH

**Direction of View:**

North

**Date:**

27 March 2024





**Photo: 178**

ST-44-EPH

**Direction of View:**

South

**Date:**

27 March 2024



**Photo: 179**

ST-42-INT

**Direction of View:**

East

**Date:**

27 March 2024



**Photo: 180**

ST-42-INT

**Direction of View:**

West

**Date:**

27 March 2024





**Photo: 181**

ST-14-PER

**Direction of View:**

East

**Date:**

28 March 2024



**Photo: 182**

ST-14-PER

**Direction of View:**

Southwest

**Date:**

28 March 2024



**Photo: 183**

Hocking River

**Direction of View:**

Northwest

**Date:**

28 March 2024





**Photo: 184**

Hocking River

**Direction of View:**

Southeast

**Date:**

28 March 2024



**Photo: 185**

ST-11-INT

**Direction of View:**

Northwest

**Date:**

28 March 2024



**Photo: 186**

ST-11-INT

**Direction of View:**

Southeast

**Date:**

28 March 2024





**Photo: 187**

Hunters Run

**Direction of View:**

Northwest

**Date:**

28 March 2024



**Photo: 188**

Hunters Run

**Direction of View:**

East

**Date:**

28 March 2024



**Photo: 189**

OW-32-POND

**Direction of View:**

East

**Date:**

28 March 2024





**Photo: 190**  
OW-32-POND

**Direction of View:**  
South

**Date:**  
28 March 2024



**Photo: 191**  
OW-22-POND

**Direction of View:**  
Northwest

**Date:**  
28 March 2024



**Photo: 192**  
OW-22-POND

**Direction of View:**  
South

**Date:**  
28 March 2024









## Appendix C

### *Data Forms*





# WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-12  
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Concave  
 Slope (%): 1-3 Lat. 39.847477 Long. -82.586566 Datum NAD83 NWI Class: PEM  
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u></u>	Is the DP within a Wetland? Yes <u>x</u> No <u></u>
Hydric Soil Present? Yes <u>x</u> No <u></u>	
Wetland Hydrology Present? Yes <u>x</u> No <u></u>	
Remarks:	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>80</u> x <u>1</u> = <u>80</u> FACW species <u>20</u> x <u>2</u> = <u>40</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>1.20</u> <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u>x</u> No <u></u>
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <u>Leersia oryzoides</u>		80	Y	OBL 1	
2. <u>Elymus virginicus</u>		20	Y	FACW 2	
3. <u></u>					
4. <u></u>					
5. <u></u>					
6. <u></u>					
7. <u></u>					
8. <u></u>					
		100	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. <u></u>					
2. <u></u>					
		0	Total Cover		

## SOIL

**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 4/1		95	10YR 5/6	5	C		M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<u></u> Histosol (A1)	<u></u> Sandy Mucky Mineral (S1)	<u></u> Redox Dark Surface (F6)
<u></u> Histic Epipedon (A2)	<u></u> 5cm Mucky Peat or Peat	<u></u> Depleted Dark Surface (F7)
<u></u> Black Histic (A3)	<u></u> Sandy Gleyed Matrix (S4)	<u></u> Redox Depressions (F8)
<u></u> Hydrogen Sulfide (A4)	<u></u> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<u></u> Stratified Layers (A5)	<u></u> Stripped Matrix (S6)	<u></u> Coast Prairie Redox (A16)
<u></u> 2 cm Muck (A10)	<u></u> Loamy Mucky Mineral (F1)	<u></u> Iron-Manganese Masses (F12)
<u></u> Depleted Below Dark Surface (A11)	<u></u> Loamy Gleyed Matrix (F2)	<u></u> Very Shallow Dark Surface (F12)
<u></u> Thick Dark Surface (A12)	<u>x</u> Depleted Matrix (F3)	<u></u> Other

**Restrictive Layer (if observed):** Type:  Depth (Inches):

**Hydric Soil Present?** Yes x No

Remarks:

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
<u>x</u> Surface Water (A1)	<u></u> Water Stained Leaves (B9)	<u></u> Surface Soil Cracks (B6)			
<u>x</u> High Water Table (A2)	<u></u> Aquatic Fauna (B13)	<u></u> Drainage Patterns (B10)			
<u>x</u> Saturation (A3)	<u></u> True Aquatic Plants (B14)	<u></u> Dry-Season Water Table (C2)			
<u></u> Water Marks (B1)	<u></u> Hydrogen Sulfide Odor (C1)	<u></u> Crayfish Burrows (C8)			
<u></u> Sediment Deposits (B2)	<u></u> Oxidized Rhizospheres on Living Roots	<u></u> Saturation Visible on Aerial Imagery (C9)			
<u></u> Drift Deposits (B3)	<u></u> Presence of Reduced Iron (C4)	<u></u> Stunted or Stressed Plants (D1)			
<u></u> Algal Mat or Crust (B4)	<u></u> Recent Iron Reduction in Tilled Soil (C6)	<u>x</u> Geomorphic Position (D2)			
<u></u> Iron Deposits (B5)	<u></u> Thin Muck Surface (C7)	<u>x</u> FAC-Neutral Test (D5)			
<u></u> Inundation Visible on Aerial Imagery (B7)	<u></u> Gauge or Well Data (D9)				
<u></u> Sparsely Vegetated Concave Surface	<u></u> Other				
<b>Field Observations:</b>	Surface Water Present? Yes <u>x</u> No <u></u>	Depth (inches) <u>1</u>			
	Water Table Present? Yes <u>x</u> No <u></u>	Depth (inches) <u>0</u>			
	Saturation Present? Yes <u>x</u> No <u></u>	Depth (inches) <u>0</u>			
			<b>Hydrology Indicators Present?</b> Yes <u>x</u> No <u></u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					



Site:	W. Lancaster-S.Baltimore-W.Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	UPL-12	
Client:	AEP		State:	OH		Section, Township, Range:	Sec S19, T 16N, R 19W				
Investigator(s):	N. Houk, N. Barnett				Landform	Terraces		Local Relief	Convex		
Slope (%):	1-3		Lat.	39.847526		Long.	-82.586522		Datum	NAD83	
								NWI Class:	N/A		
Soil Map Unit Name:	Canal silt loam, 0 to 2 percent slopes										
Climatic/hydrologic conditions typical for time of year?				Y/N	Y						
Vegetation		N	Soil	N	or Hydrology		N	significantly disturbed			
Vegetation		N	Soil	N	or Hydrology		N	naturally problematic			
Are Normal Circumstances Present?				Yes	x	No					

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes          No          x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status				
1.						<b>Dominance Test Worksheet</b>			
2.						Number of dominant species that are OBL, FACW, or FAC: 1			
3.						Total number of dominant species across all strata: 4			
4.						Percent of dominant species that are OBL, FACW, or FAC: 25.00			
5.			0	Total Cover		<b>Prevalence Index Worksheet</b>			
						Total % cover of:			
						OBL species	0	x 1	0
						FACW species	0	x 2	0
						FAC species	25	x 3	75
						FACU species	85	x 4	340
						UPL species	0	x 5	0
						Total	110		415
						Prevalence Index: 3.77			
						<b>Hydrophytic Vegetation Indicators:</b>			
						Rapid Test for Hydrophytic Veg.			
						Dominance Test is >50%			
						Prevalence Index is ≤3.0*			
						Morphological Adaptations*			
						Problematic Hydrophytic Vegetation*			
						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
						<b>Hydrophytic Vegetation Present?</b>			
						Yes	No	x	
Shrub Stratum		Plot size: 15'							
1.	<i>Rosa multiflora</i>		8	Y	FACU	4			
2.	<i>Rubus allegheniensis</i>		2	Y	FACU	4			
3.									
4.									
5.									
			10	Total Cover					
Herb Stratum		Plot size: 5'							
1.	<i>Solidago canadensis</i>		75	Y	FACU	4			
2.	<i>Apocynum cannabinum</i>		20	Y	FAC	3			
3.	<i>Vernonia gigantea</i>		5	N	FAC	3			
4.									
5.									
6.									
7.									
8.									
			100	Total Cover					
Woody Vine Stratum		Plot size: 30'							
1.									
2.									
			0	Total Cover					
Remarks:									

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-13	10YR 4/1	100					Si C L	
13-18	10YR 4/1	95	10YR 5/6	5	C	M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Guage or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No x				
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S.Baltimore-W.Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	WL-10	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S25, R 16N, R 19W		
Investigator(s):	N. Houk, N. Barnett		Landform			Terraces		Local Relief		Concave	
Slope (%):	1-3		Lat.	39.841685		Long.	-82.589005		Datum	NAD83	
Soil Map Unit Name:			Canal silt loam, 0 to 2 percent slopes								
Climatic/hydrologic conditions typical for time of year?			Y/N		Y						
Vegetation			N		or Hydrology		N		significantly disturbed		
Vegetation			N		or Hydrology		N		naturally problematic		
Are Normal Circumstances Present?			Yes		x		No				

Hydrophytic Vegetation Present? Yes	<input checked="" type="checkbox"/>	No	_____	Is the DP within a Wetland? Yes <input checked="" type="checkbox"/> No
Hydric Soil Present? Yes	<input checked="" type="checkbox"/>	No	_____	
Wetland Hydrology Present? Yes	<input checked="" type="checkbox"/>	No	_____	
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Elymus virginicus</i>		25	Y	FACW 2
2.	<i>Barbarea vulgaris</i>		15	Y	FAC 3
3.					
4.					
5.					
6.					
7.					
8.					
			40	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 2

Total number of dominant species across all strata: 2

Percent of dominant species that are OBL, FACW, or FAC: 100.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x	1	0
FACW species	25	x	2	50
FAC species	15	x	3	45
FACU species	0	x	4	0
UPL species	0	x	5	0
Total	40			95

Prevalence Index: 2.38

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg.

x Dominance Test is >50%

x Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	x	No
-----	---	----

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/1	95	10YR 5/6	5	C	M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b> <b>Yes</b> <b>x</b> <b>No</b>
	Remarks: _____

<b>Wetland Hydrology Indicators:</b>						
<b>Primary Indicators (check all that apply)</b>				<b>Secondary Indicators</b>		
<input checked="" type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)	
<input checked="" type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)	
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)	
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)	
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input checked="" type="checkbox"/>	Geomorphic Position (D2)	
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input checked="" type="checkbox"/>	FAC-Neutral Test (D5)	
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)			
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other			
<b>Field Observations:</b>						
Surface Water Present?	Yes	x	No	Depth (inches)	1	
Water Table Present?	Yes	x	No	Depth (inches)	0	
Saturation Present?	Yes	x	No	Depth (inches)	0	
					<b>Hydrology Indicators Present?</b>	
					<b>Yes</b>	<b>x No</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-10  
Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W  
Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex  
Slope (%): Lat. 39.841658 Long. -82.589099 Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes	x	No	
Wetland Hydrology Present? Yes	No	x	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 1 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 0 FACW species 0 x 2 0 FAC species 0 x 3 0 FACU species 0 x 4 0 UPL species 80 x 5 400 Total 80 400 Prevalence Index: 5.00 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Hydrophytic Vegetation Present?</b> Yes No x
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1.	<i>Triticum aestivum residue</i>	80	Y	UPL 5	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
		80	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		

Remarks:

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-4	10YR 3/1		100						Si C L	
4-18	10YR 3/1		95	10YR 5/6	5	C	M		Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Histosol (A1)	Sandy Mucky Mineral (S1)	x	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat		Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils</b>
Stratified Layers (A5)	Stripped Matrix (S6)		Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)		Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)		Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes

x

No

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	Surface Soil Cracks (B6)
High Water Table (A2)	Drainage Patterns (B10)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Geomorphic Position (D2)
Iron Deposits (B5)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface	
Water Stained Leaves (B9)	
Aquatic Fauna (B13)	
True Aquatic Plants (B14)	
Hydrogen Sulfide Odor (C1)	
Oxidized Rhizospheres on Living Roots	
Presence of Reduced Iron (C4)	
Recent Iron Reduction in Tilled Soil (C6)	
Thin Muck Surface (C7)	
Gauge or Well Data (D9)	
Other	

Field Observations: Surface Water Present? Yes

No

x

Depth (inches)

Water Table Present? Yes

No

x

Depth (inches)

Saturation Present? Yes

No

x

Depth (inches)

Hydrology Indicators Present?

Yes

No

x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-5  
Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W  
Investigator(s): L. Vine, E.Holt Landform Lake Plains Local Relief Concave  
Slope (%): Lat. 39.834307° Long. -82.591561° Datum NAD83 NWI Class: PEM  
Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes X No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	X	No	
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	X	No	
Is the DP within a Wetland?			Yes X No

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 4 Total number of dominant species across all strata: 2 Percent of dominant species that are OBL, FACW, or FAC: 1.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 80 x 1 80 FACW species 0 x 2 0 FAC species 20 x 3 60 FACU species 0 x 4 0 UPL species 0 x 5 0 Total 100 140 Prevalence Index: 1.40 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. X Dominance Test is >50% X Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes X No
1.					
2.					
3.					
4.					
5.		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
			Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Scirpus atrovirens</i>		60	Y	OBL 1	
2. <i>Apocynum cannabinum</i>		20	Y	FAC 3	
3. <i>Alisma subcordatum</i>		10	N	OBL 1	
4. <i>Juncus effusus</i>		10	N	OBL 1	
5.					
6.					
7.					
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-6	10YR 4/2		100						SiL	
6-18	10YR 4/2		95	10YR 7/6	5	C	M		SiL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

<b>Hydric Soil Indicators:</b>			
Histosol (A1)	Sandy Mucky Mineral (S1)	X	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat		Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils</b>
Stratified Layers (A5)	Stripped Matrix (S6)		Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)		Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)		Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes X No

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

<b>Primary Indicators (check all that apply)</b>				<b>Secondary Indicators</b>	
Surface Water (A1)		Water Stained Leaves (B9)		Surface Soil Cracks (B6)	
X High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)	
X Saturation (A3)		True Aquatic Plants (B14)		Dry-Season Water Table (C2)	
Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots		Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soil (C6)		X Geomorphic Position (D2)	
Iron Deposits (B5)		Thin Muck Surface (C7)		X FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (B7)		Guage or Well Data (D9)			
Sparsely Vegetated Concave Surface		Other			
<b>Field Observations:</b>				<b>Hydrology Indicators Present?</b>	
Surface Water Present?	Yes	No	X	Depth (inches)	
Water Table Present?	Yes	X	No	Depth (inches)	
Saturation Present?	Yes	X	No	Depth (inches)	
				Yes X No	

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-5  
Client: AEP State: OH Section, Township, Range: Sec S25, R 16N, R 19W  
Investigator(s): L. Vine, E.Holt Landform Lake Plains Local Relief Convex  
Slope (%): Lat. 39.834361° Long. -82.591594° Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>  </u>	Is the DP within a Wetland? Yes <u>  </u> No <u>  </u> X <u>  </u>
Hydric Soil Present? Yes <u>  </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>  </u>	
Remarks:	

## VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>40.00</u>
1. <u>  </u>					
2. <u>  </u>					
3. <u>  </u>					
4. <u>  </u>					
5. <u>  </u>		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				<b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>20</u> x <u>2</u> = <u>40</u> FAC species <u>5</u> x <u>3</u> = <u>15</u> FACU species <u>85</u> x <u>4</u> = <u>340</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>110</u> Prevalence Index: <u>3.59</u>
1. <u>Rubus allegheniensis</u>		<u>5</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Acer rubrum</u>		<u>5</u>	<u>Y</u>	<u>FAC</u> <u>3</u>	
3. <u>  </u>					
4. <u>  </u>					
5. <u>  </u>		<u>10</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				<b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% X Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Hydrophytic Vegetation Present?</b> Yes <u>  </u> X <u>  </u> No <u>  </u>
1. <u>Solidago canadensis</u>		<u>50</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
2. <u>Schedonorus arundinaceus</u>		<u>30</u>	<u>Y</u>	<u>FACU</u> <u>4</u>	
3. <u>Dichanthelium clandestinum</u>		<u>20</u>	<u>Y</u>	<u>FACW</u> <u>2</u>	
4. <u>  </u>					
5. <u>  </u>					
6. <u>  </u>					
7. <u>  </u>					
8. <u>  </u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u>  </u>					
2. <u>  </u>					
		<u>0</u>	Total Cover		
Remarks:					

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)										
Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-12	10YR 3/2		100						SiCL	
12-18	10YR 4/2		95	10YR 6/6	5	C	M		SiCL	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix										
<b>Hydric Soil Indicators:</b>										
<u>  </u> Histosol (A1)	<u>  </u> Sandy Mucky Mineral (S1)				<u>  </u> Redox Dark Surface (F6)					
<u>  </u> Histic Epipedon (A2)	<u>  </u> 5cm Mucky Peat or Peat				<u>  </u> Depleted Dark Surface (F7)					
<u>  </u> Black Histic (A3)	<u>  </u> Sandy Gleyed Matrix (S4)				<u>  </u> Redox Depressions (F8)					
<u>  </u> Hydrogen Sulfide (A4)	<u>  </u> Sandy Redox (S5)				<b>Indicators for Problematic Hydric Soils</b>					
<u>  </u> Stratified Layers (A5)	<u>  </u> Stripped Matrix (S6)				<u>  </u> Coast Prairie Redox (A16)					
<u>  </u> 2 cm Muck (A10)	<u>  </u> Loamy Mucky Mineral (F1)				<u>  </u> Iron-Manganese Masses (F12)					
<u>  </u> Depleted Below Dark Surface (A11)	<u>  </u> Loamy Gleyed Matrix (F2)				<u>  </u> Very Shallow Dark Surface (F12)					
<u>  </u> Thick Dark Surface (A12)	<u>  </u> Depleted Matrix (F3)				<u>  </u> Other					
<b>Restrictive Layer (if observed):</b> Type: <u>  </u> Depth (Inches): <u>  </u>										
<b>Hydric Soil Present?</b> Yes <u>  </u> No <u>  </u> X <u>  </u>										
Remarks:										

## HYDROLOGY

## Wetland Hydrology Indicators:

<b>Primary Indicators (check all that apply)</b>					<b>Secondary Indicators</b>		
<u>  </u> Surface Water (A1)	<u>  </u> Water Stained Leaves (B9)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Surface Soil Cracks (B6)	<u>  </u>	
<u>  </u> High Water Table (A2)	<u>  </u> Aquatic Fauna (B13)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Drainage Patterns (B10)	<u>  </u>	
X <u>  </u> Saturation (A3)	<u>  </u> True Aquatic Plants (B14)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Dry-Season Water Table (C2)	<u>  </u>	
<u>  </u> Water Marks (B1)	<u>  </u> Hydrogen Sulfide Odor (C1)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Crayfish Burrows (C8)	<u>  </u>	
<u>  </u> Sediment Deposits (B2)	<u>  </u> Oxidized Rhizospheres on Living Roots	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Saturation Visible on Aerial Imagery (C9)	<u>  </u>	
<u>  </u> Drift Deposits (B3)	<u>  </u> Presence of Reduced Iron (C4)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Stunted or Stressed Plants (D1)	<u>  </u>	
<u>  </u> Algal Mat or Crust (B4)	<u>  </u> Recent Iron Reduction in Tilled Soil (C6)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Geomorphic Position (D2)	<u>  </u>	
<u>  </u> Iron Deposits (B5)	<u>  </u> Thin Muck Surface (C7)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> FAC-Neutral Test (D5)	<u>  </u>	
<u>  </u> Inundation Visible on Aerial Imagery (B7)	<u>  </u> Gauge or Well Data (D9)	<u>  </u>	<u>  </u>	<u>  </u>			
<u>  </u> Sparsely Vegetated Concave Surface	<u>  </u> Other	<u>  </u>	<u>  </u>	<u>  </u>			
<b>Field Observations:</b> Surface Water Present? Yes <u>  </u> No <u>X</u> Depth (inches) <u>  </u>					<b>Hydrology Indicators Present?</b> Yes <u>  </u> X <u>  </u> No <u>  </u>		
Water Table Present? Yes <u>  </u> No <u>X</u> Depth (inches) <u>  </u>							
Saturation Present? Yes <u>X</u> No <u>  </u> 10 Depth (inches) <u>  </u>							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-68  
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W  
 Investigator(s): L. Vine, E. Holt Landform: Till Plains Local Relief: Concave  
 Slope (%): 1-3 Lat. 39.822005° Long. -82.597640° Datum: NAD83 NWI Class: PEM  
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u></u>	Is the DP within a Wetland? Yes <u>X</u> No <u></u>
Hydric Soil Present? Yes <u>X</u> No <u></u>	
Wetland Hydrology Present? Yes <u>X</u> No <u></u>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. <u></u>					<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>60.00</u>
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <u></u>					<b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>30</u> x <u>2</u> = <u>60</u> FAC species <u>1</u> x <u>3</u> = <u>3</u> FACU species <u>14</u> x <u>4</u> = <u>56</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>46</u> = <u>120</u> Prevalence Index: <u>2.61</u>
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <u>Juncus effusus</u>		40	Y	OBL 1	<b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u></u>
2. <u>Dichanthelium clandestinum</u>		30	Y	FACW 2	
3. <u>Solidago canadensis</u>		10	N	FACU 4	
4. <u>Elymus canadensis</u>		4	N	FACU 4	
5. <u>Carex molesta</u>		1	N	FAC 3	
6. <u></u>					
7. <u></u>					
8. <u></u>					
		85	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. <u></u>					
2. <u></u>					
		0	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 4/2	90	10YR 5/4	10	C		M	SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

<u></u> Histosol (A1)	<u></u> Sandy Mucky Mineral (S1)	<u>X</u> Redox Dark Surface (F6)
<u></u> Histic Epipedon (A2)	<u></u> 5cm Mucky Peat or Peat	<u></u> Depleted Dark Surface (F7)
<u></u> Black Histic (A3)	<u></u> Sandy Gleyed Matrix (S4)	<u></u> Redox Depressions (F8)
<u></u> Hydrogen Sulfide (A4)	<u></u> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<u></u> Stratified Layers (A5)	<u></u> Stripped Matrix (S6)	<u></u> Coast Prairie Redox (A16)
<u></u> 2 cm Muck (A10)	<u></u> Loamy Mucky Mineral (F1)	<u></u> Iron-Manganese Masses (F12)
<u></u> Depleted Below Dark Surface (A11)	<u></u> Loamy Gleyed Matrix (F2)	<u></u> Very Shallow Dark Surface (F12)
<u></u> Thick Dark Surface (A12)	<u></u> Depleted Matrix (F3)	<u></u> Other

Restrictive Layer (if observed): Type: Depth (Inches): 

Hydric Soil Present?

Yes X No 

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)					Secondary Indicators	
<u></u> Surface Water (A1)	<u></u> Water Stained Leaves (B9)	<u></u> Surface Soil Cracks (B6)			<u></u> Drainage Patterns (B10)	
<u>X</u> High Water Table (A2)	<u></u> Aquatic Fauna (B13)	<u></u> Dry-Season Water Table (C2)			<u></u> Crayfish Burrows (C8)	
<u></u> Saturation (A3)	<u></u> True Aquatic Plants (B14)	<u></u> Saturation Visible on Aerial Imagery (C9)			<u></u> Stunted or Stressed Plants (D1)	
<u></u> Water Marks (B1)	<u></u> Hydrogen Sulfide Odor (C1)	<u>X</u> Geomorphic Position (D2)			<u>X</u> FAC-Neutral Test (D5)	
<u></u> Sediment Deposits (B2)	<u></u> Oxidized Rhizospheres on Living Roots					
<u></u> Drift Deposits (B3)	<u></u> Presence of Reduced Iron (C4)					
<u></u> Algal Mat or Crust (B4)	<u></u> Recent Iron Reduction in Tilled Soil (C6)					
<u></u> Iron Deposits (B5)	<u></u> Thin Muck Surface (C7)					
<u></u> Inundation Visible on Aerial Imagery (B7)	<u></u> Gauge or Well Data (D9)					
<u></u> Sparsely Vegetated Concave Surface	<u></u> Other					
<b>Field Observations:</b>	Surface Water Present? Yes <u></u> No <u>X</u>	Depth (inches)			<b>Hydrology Indicators Present?</b> Yes <u>X</u> No <u></u>	
	Water Table Present? Yes <u>X</u> No <u></u>	Depth (inches) 5				
	Saturation Present? Yes <u></u> No <u>X</u>	Depth (inches)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



# WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-68  
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W  
 Investigator(s): L. Vine, E.Holt Landform Till Plains Local Relief Convex  
 Slope (%): Lat. 39.822032° Long. -82.597449° Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Bennington silt loam, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u>	Is the DP within a Wetland?
Hydric Soil Present? Yes <u>X</u> No <u></u>	Yes <u></u> No <u></u> X <u></u>
Wetland Hydrology Present? Yes <u></u> No <u>X</u>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>50.00</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>50</u> x <u>3</u> = <u>150</u> FACU species <u>40</u> x <u>4</u> = <u>160</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>91</u> Prevalence Index: <u>3.42</u> <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u></u> No <u></u> X <u></u>
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. <u>Rubus allegheniensis</u>		10	Y	FACU 4	
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		10	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <u>Juncus tenuis</u>		50	Y	FAC 3	
2. <u>Solidago canadensis</u>		20	Y	FACU 4	
3. <u>Symphytotrichum ericoides</u>		10	Y	FACU 4	
4. <u></u>					
5. <u></u>					
6. <u></u>					
7. <u></u>					
8. <u></u>		80	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. <u></u>					
2. <u></u>		0	Total Cover		
Remarks:					

## SOIL

**Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)**

Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 4/2	90	10YR 5/4	10	C		M	SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

**Hydric Soil Indicators:**

<u></u> Histosol (A1)	<u></u> Sandy Mucky Mineral (S1)	<u>X</u> Redox Dark Surface (F6)
<u></u> Histic Epipedon (A2)	<u></u> 5cm Mucky Peat or Peat	<u></u> Depleted Dark Surface (F7)
<u></u> Black Histic (A3)	<u></u> Sandy Gleyed Matrix (S4)	<u></u> Redox Depressions (F8)
<u></u> Hydrogen Sulfide (A4)	<u></u> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<u></u> Stratified Layers (A5)	<u></u> Stripped Matrix (S6)	<u></u> Coast Prairie Redox (A16)
<u></u> 2 cm Muck (A10)	<u></u> Loamy Mucky Mineral (F1)	<u></u> Iron-Manganese Masses (F12)
<u></u> Depleted Below Dark Surface (A11)	<u></u> Loamy Gleyed Matrix (F2)	<u></u> Very Shallow Dark Surface (F12)
<u></u> Thick Dark Surface (A12)	<u></u> Depleted Matrix (F3)	<u></u> Other

**Restrictive Layer (if observed):** Type:  Depth (Inches):

**Hydric Soil Present?** Yes  X  No

Remarks:

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators		
<u></u> Surface Water (A1)	<u></u> Water Stained Leaves (B9)	<u></u> Surface Soil Cracks (B6)				
<u></u> High Water Table (A2)	<u></u> Aquatic Fauna (B13)	<u></u> Drainage Patterns (B10)				
<u></u> Saturation (A3)	<u></u> True Aquatic Plants (B14)	<u></u> Dry-Season Water Table (C2)				
<u></u> Water Marks (B1)	<u></u> Hydrogen Sulfide Odor (C1)	<u></u> Crayfish Burrows (C8)				
<u></u> Sediment Deposits (B2)	<u></u> Oxidized Rhizospheres on Living Roots	<u></u> Saturation Visible on Aerial Imagery (C9)				
<u></u> Drift Deposits (B3)	<u></u> Presence of Reduced Iron (C4)	<u></u> Stunted or Stressed Plants (D1)				
<u></u> Algal Mat or Crust (B4)	<u></u> Recent Iron Reduction in Tilled Soil (C6)	<u></u> Geomorphic Position (D2)				
<u></u> Iron Deposits (B5)	<u></u> Thin Muck Surface (C7)	<u></u> FAC-Neutral Test (D5)				
<u></u> Inundation Visible on Aerial Imagery (B7)	<u></u> Gauge or Well Data (D9)					
<u></u> Sparsely Vegetated Concave Surface	<u></u> Other					
<b>Field Observations:</b>	Surface Water Present? Yes <u></u> No <u></u>	Depth (inches)		<b>Hydrology Indicators Present?</b>		
	Water Table Present? Yes <u></u> No <u></u>	Depth (inches)		Yes <u></u>	No <u></u>	X <u></u>
	Saturation Present? Yes <u></u> No <u></u>	Depth (inches)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
<b>No hydric indicators</b>						



# WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-60  
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W  
 Investigator(s): L. Vine, E.Holt Landform: Till Plains Local Relief: Concave  
 Slope (%): Lat. 39.809106° Long. -82.610454° Datum: NAD83 NWI Class: PEM  
 Soil Map Unit Name: Marengo clay loam  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No   

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>  </u>	Is the DP within a Wetland? Yes <u>X</u> No <u>  </u>
Hydric Soil Present? Yes <u>X</u> No <u>  </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>  </u>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>5</u> Total number of dominant species across all strata: <u>6</u> Percent of dominant species that are OBL, FACW, or FAC: <u>83.33</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>45</u> x <u>2</u> = <u>90</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>10</u> x <u>5</u> = <u>50</u> Total <u>56</u> = <u>141</u> Prevalence Index: <u>2.52</u> <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>  </u>
1. <u>  </u>					
2. <u>  </u>					
3. <u>  </u>					
4. <u>  </u>					
5. <u>  </u>		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. <u>  </u>					
2. <u>  </u>					
3. <u>  </u>					
4. <u>  </u>					
5. <u>  </u>		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <u>Juncus effusus</u>		45	Y	OBL 1	
2. <u>Phalaris arundinacea</u>		25	Y	FACW 2	
3. <u>Thyrsanthella difformis</u>		15	N	FACW 2	
4. <u>Dipsacus laciniatus</u>		10	N	UPL 5	
5. <u>Lepidium latifolium</u>		3	N	FACW 2	
6. <u>Carex vulpinoidea</u>		2	N	FACW 2	
7. <u>  </u>					
8. <u>  </u>					
		100	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. <u>  </u>					
2. <u>  </u>					
		0	Total Cover		
Remarks: <u>  </u>					

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-6	10YR 4/2	100						SiCL	
6-18	10YR 4/2	95	10YR 4/6	10	C	M		SiCL	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
<u>  </u> Histosol (A1)	<u>  </u> Sandy Mucky Mineral (S1)				<u>X</u>	<u>  </u> Redox Dark Surface (F6)			
<u>  </u> Histic Epipedon (A2)	<u>  </u> 5cm Mucky Peat or Peat				<u>  </u>	<u>  </u> Depleted Dark Surface (F7)			
<u>  </u> Black Histic (A3)	<u>  </u> Sandy Gleyed Matrix (S4)				<u>  </u>	<u>  </u> Redox Depressions (F8)			
<u>  </u> Hydrogen Sulfide (A4)	<u>  </u> Sandy Redox (S5)				<u>  </u>	<b>Indicators for Problematic Hydric Soils</b>			
<u>  </u> Stratified Layers (A5)	<u>  </u> Stripped Matrix (S6)				<u>  </u>	<u>  </u> Coast Prairie Redox (A16)			
<u>  </u> 2 cm Muck (A10)	<u>  </u> Loamy Mucky Mineral (F1)				<u>  </u>	<u>  </u> Iron-Manganese Masses (F12)			
<u>  </u> Depleted Below Dark Surface (A11)	<u>  </u> Loamy Gleyed Matrix (F2)				<u>  </u>	<u>  </u> Very Shallow Dark Surface (F12)			
<u>  </u> Thick Dark Surface (A12)	<u>  </u> Depleted Matrix (F3)				<u>  </u>	<u>  </u> Other			
<b>Restrictive Layer (if observed):</b> Type: <u>  </u>									
Depth (Inches): <u>  </u>					<b>Hydric Soil Present?</b> Yes <u>X</u> No <u>  </u>				
Remarks: <u>  </u>									

## HYDROLOGY

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<u>  </u> Surface Water (A1)	<u>  </u> Water Stained Leaves (B9)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Surface Soil Cracks (B6)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>X</u> High Water Table (A2)	<u>  </u> Aquatic Fauna (B13)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Drainage Patterns (B10)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>X</u> Saturation (A3)	<u>  </u> True Aquatic Plants (B14)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Dry-Season Water Table (C2)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Water Marks (B1)	<u>  </u> Hydrogen Sulfide Odor (C1)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Crayfish Burrows (C8)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Sediment Deposits (B2)	<u>  </u> Oxidized Rhizospheres on Living Roots	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Saturation Visible on Aerial Imagery (C9)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Drift Deposits (B3)	<u>  </u> Presence of Reduced Iron (C4)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u> Stunted or Stressed Plants (D1)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Algal Mat or Crust (B4)	<u>  </u> Recent Iron Reduction in Tilled Soil (C6)	<u>  </u>	<u>  </u>	<u>  </u>	<u>X</u> Geomorphic Position (D2)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Iron Deposits (B5)	<u>  </u> Thin Muck Surface (C7)	<u>  </u>	<u>  </u>	<u>  </u>	<u>X</u> FAC-Neutral Test (D5)	<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Inundation Visible on Aerial Imagery (B7)	<u>  </u> Gauge or Well Data (D9)	<u>  </u>	<u>  </u>	<u>  </u>		<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<u>  </u> Sparsely Vegetated Concave Surface	<u>  </u> Other	<u>  </u>	<u>  </u>	<u>  </u>		<u>  </u>	<u>  </u>	<u>  </u>	<u>  </u>
<b>Field Observations:</b> Surface Water Present? Yes <u>  </u> No <u>X</u>					<b>Hydrology Indicators Present?</b> Yes <u>X</u> No <u>  </u>				
Water Table Present? Yes <u>X</u> No <u>  </u>									
Saturation Present? Yes <u>X</u> No <u>  </u>									
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
<b>No hydric indicators</b>									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-60  
Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W  
Investigator(s): L. Vine, E.Holt Landform: Till Plains Local Relief: Convex  
Slope (%): Lat. 39.809228° Long. -82.610301° Datum: NAD83 NWI Class: N/A  
Soil Map Unit Name: Marengo clay loam  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes X No
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	No	X	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 4 Total number of dominant species across all strata: 7 Percent of dominant species that are OBL, FACW, or FAC: 57.14 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 1 FACW species 0 x 2 0 FAC species 10 x 3 30 FACU species 70 x 4 280 UPL species 0 x 5 0 Total 81 311 Prevalence Index: 3.84 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes X No
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Schedonorus arundinaceus</i>		55	Y	FACU 4	
2. <i>Juncus effusus</i>		10	N	OBL 1	
3. <i>Juncus tenuis</i>		10	N	FAC 3	
4. <i>Carex frankii</i>		5	N	OBL 1	
5. <i>Trifolium pratense</i>		5	N	FACU 4	
6. <i>Dipsacus fullonum</i>		5	N	FACU 4	
7. <i>Solidago canadensis</i>		5	N	FACU 4	
8.					
		95	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

## SOIL

<b>Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)</b>														
Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks				
0-6	10YR 4/2		100						SiCL					
6-18	10YR 4/2		95	10YR 4/6	10	C	M		SiCL					
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix														
<b>Hydric Soil Indicators:</b>														
Histosol (A1)					Sandy Mucky Mineral (S1)					Redox Dark Surface (F6)				
Histic Epipedon (A2)					5cm Mucky Peat or Peat					Depleted Dark Surface (F7)				
Black Histic (A3)					Sandy Gleyed Matrix (S4)					Redox Depressions (F8)				
Hydrogen Sulfide (A4)					Sandy Redox (S5)					<b>Indicators for Problematic Hydric Soils</b>				
Stratified Layers (A5)					Stripped Matrix (S6)					Coast Prairie Redox (A16)				
2 cm Muck (A10)					Loamy Mucky Mineral (F1)					Iron-Manganese Masses (F12)				
Depleted Below Dark Surface (A11)					Loamy Gleyed Matrix (F2)					Very Shallow Dark Surface (F12)				
Thick Dark Surface (A12)					Depleted Matrix (F3)					Other				
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____										<b>Hydric Soil Present?</b> Yes X No				
Remarks:														

## HYDROLOGY

## Wetland Hydrology Indicators:

<b>Primary Indicators (check all that apply)</b>					<b>Secondary Indicators</b>									
Surface Water (A1)					Water Stained Leaves (B9)					Surface Soil Cracks (B6)				
High Water Table (A2)					Aquatic Fauna (B13)					Drainage Patterns (B10)				
X Saturation (A3)					True Aquatic Plants (B14)					Dry-Season Water Table (C2)				
Water Marks (B1)					Hydrogen Sulfide Odor (C1)					Crayfish Burrows (C8)				
Sediment Deposits (B2)					Oxidized Rhizospheres on Living Roots					Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)					Presence of Reduced Iron (C4)					Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)					Recent Iron Reduction in Tilled Soil (C6)					Geomorphic Position (D2)				
Iron Deposits (B5)					Thin Muck Surface (C7)					X FAC-Neutral Test (D5)				
Inundation Visible on Aerial Imagery (B7)					Gauge or Well Data (D9)									
Sparsely Vegetated Concave Surface					Other									
<b>Field Observations:</b> Surface Water Present? Yes No X					Depth (inches)					<b>Hydrology Indicators Present?</b>				
Water Table Present? Yes No X					Depth (inches)					Yes No X				
Saturation Present? Yes No X					Depth (inches)									

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-60A  
Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, R 19W  
Investigator(s): L. Vine, E.Holt Landform Moraines Local Relief Concave  
Slope (%): Lat. 39.807529° Long. -82.611944° Datum NAD83 NWI Class: PEM  
Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	X	No	
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	X	No	
Is the DP within a Wetland?			Yes X No

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 8 Total number of dominant species across all strata: 8 Percent of dominant species that are OBL, FACW, or FAC: 100.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 1 FACW species 25 x 2 50 FAC species 0 x 3 0 FACU species 0 x 4 0 UPL species 0 x 5 0 Total 26 51 Prevalence Index: 1.96 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes X No
1.					
2.					
3.					
4.					
5.		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Juncus effusus</i>		20	Y	OBL 1	
2. <i>Scirpus cyperinus</i>		20	Y	OBL 1	
3. <i>Phalaris arundinacea</i>		15	N	FACW 2	
4. <i>Carex frankii</i>		10	N	OBL 1	
5. <i>Carex vulpinoidea</i>		10	N	FACW 2	
6. <i>Alisma subcordatum</i>		5	N	OBL 1	
7. <i>Typha latifolia</i>		5	N	OBL 1	
8. <i>Carex muskingumensis</i>		5	N	OBL 1	
		90	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

## SOIL

<b>Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)</b>									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-4	10YR 4/2	100						SiL	
4-18	10YR 4/2	90	10YR 4/6	10	C	M	M	SICL	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)				_____ X Redox Dark Surface (F6)				
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat				_____ Depleted Dark Surface (F7)				
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)				_____ Redox Depressions (F8)				
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)				<b>Indicators for Problematic Hydric Soils</b>				
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)				_____ Coast Prairie Redox (A16)				
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)				_____ Iron-Manganese Masses (F12)				
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)				_____ Very Shallow Dark Surface (F12)				
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)				_____ Other				
<b>Restrictive Layer (if observed):</b> Type: _____									
Depth (Inches): _____					<b>Hydric Soil Present?</b> Yes X No				
Remarks:									

## HYDROLOGY

## Wetland Hydrology Indicators:

<b>Primary Indicators (check all that apply)</b>					<b>Secondary Indicators</b>				
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)				_____ Surface Soil Cracks (B6)				
X High Water Table (A2)	_____ Aquatic Fauna (B13)				_____ Drainage Patterns (B10)				
X Saturation (A3)	_____ True Aquatic Plants (B14)				_____ Dry-Season Water Table (C2)				
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)				X Crayfish Burrows (C8)				
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots				_____ Saturation Visible on Aerial Imagery (C9)				
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)				_____ Stunted or Stressed Plants (D1)				
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)				X Geomorphic Position (D2)				
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)				X FAC-Neutral Test (D5)				
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)								
_____ Sparsely Vegetated Concave Surface	_____ Other								
<b>Field Observations:</b> Surface Water Present? Yes No X					<b>Hydrology Indicators Present?</b>				
Water Table Present? Yes X No					Yes X No				
Saturation Present? Yes X No					Yes X No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									

No hydric indicators



Site:	W. Lancaster-S.Baltimore-W.Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	UPL-60A		
Client:	AEP		State:	OH		Section, Township, Range:	Sec S1, T 15N, R 19W					
Investigator(s):	L. Vine, E.Holt				Landform	Moraines		Local Relief	Convex			
Slope (%):	Lat.		39.807445°		Long.	-82.611981°		Datum	NAD83		NWI Class:	N/A
Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes												
Climatic/hydrologic conditions typical for time of year?				Y/N	Y							
Vegetation		N	Soil	N	or Hydrology		N	significantly disturbed				
Vegetation		N	Soil	N	or Hydrology		N	naturally problematic				
Are Normal Circumstances Present?				Yes	x	No						

Hydrophytic Vegetation Present? Yes	_____	No	_____	Is the DP within a Wetland? Yes          No          X
Hydric Soil Present? Yes	_____	No	_____	
Wetland Hydrology Present? Yes	_____	No	_____	

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Solidago canadensis</i>		70	Y	FACU 4
2.	<i>Rubus allegheniensis</i>		15	N	FACU 4
3.	<i>Rosa multiflora</i>		10	N	FACU 4
4.	<i>Poa pratensis</i>		5	N	FAC 3
5.					
6.					
7.					
8.					
			100	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	

### Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1

Total number of dominant species across all strata: 4

Percent of dominant species that are OBL, FACW, or FAC: 25.00

### Prevalence Index Worksheet

Total % cover of:

OBL species	1	x	1	=	1
FACW species	0	x	2	=	0
FAC species	5	x	3	=	15
FACU species	95	x	4	=	380
UPL species	0	x	5	=	0
Total	101				396

Prevalence Index: 3.92

### Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg.

Dominance Test is >50%

Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

### Hydrophytic Vegetation Present?

Yes	No	X
-----	----	---

Remarks:

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-4	10YR 3/2	100					SICL	
4-18	10YR 3/2	95	10YR 6/6	5	C	M	SICL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____		<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>X</b>	<b>No</b>
Depth (Inches): _____					
Remarks: _____					

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)						Secondary Indicators			
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
X	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
X	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>		Surface Water Present?	Yes	No	X	Depth (inches)			
		Water Table Present?	Yes	X	No	Depth (inches)	12	<b>Hydrology Indicators Present?</b>	
		Saturation Present?	Yes	X	No	Depth (inches)		<b>Yes</b>	<b>X</b> <b>No</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
<b>No hydric indicators</b>									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-50  
Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W  
Investigator(s): N. Houk, N. Barnett Landform: Moraines Local Relief: Concave  
Slope (%): 1-3 Lat. 39.793217 Long. -82.621980 Datum: NAD83 NWI Class: PEM  
Soil Map Unit Name: Centerburg silt loam, 2 to 6 percent slopes, eroded  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	x	No	
Hydric Soil Present? Yes	x	No	
Wetland Hydrology Present? Yes	x	No	
Is the DP within a Wetland?			Yes x No

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 1 Total number of dominant species across all strata: 1 Percent of dominant species that are OBL, FACW, or FAC: 100.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 0 FACW species 100 x 2 200 FAC species 0 x 3 0 FACU species 0 x 4 0 UPL species 0 x 5 0 Total 100 200 Prevalence Index: 2.00 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes x No
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1.	Carex vulpinoidea	100	Y	FACW 2	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		

Remarks:

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 4/1		85	7.5YR 4/6	15	C		M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

<b>Hydric Soil Indicators:</b>		
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F6)
___ Histic Epipedon (A2)	___ 5cm Mucky Peat or Peat	___ Depleted Dark Surface (F7)
___ Black Histic (A3)	___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Hydrogen Sulfide (A4)	___ Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
___ Stratified Layers (A5)	___ Stripped Matrix (S6)	
___ 2 cm Muck (A10)	___ Loamy Mucky Mineral (F1)	
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	
		___ Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes x No

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___	___	___ Surface Soil Cracks (B6)	___
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___	___	___ Drainage Patterns (B10)	___
___ Saturation (A3)	___ True Aquatic Plants (B14)	___	___	___ Dry-Season Water Table (C2)	___
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___	___	___ Crayfish Burrows (C8)	___
___ Sediment Deposits (B2)	x Oxidized Rhizospheres on Living Roots	___	___	___ Saturation Visible on Aerial Imagery (C9)	___
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___	___	___ Stunted or Stressed Plants (D1)	___
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soil (C6)	___	___	x Geomorphic Position (D2)	___
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___	___	x FAC-Neutral Test (D5)	___
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)	___	___		
___ Sparsely Vegetated Concave Surface	___ Other	___	___		
<b>Field Observations:</b>				<b>Hydrology Indicators Present?</b>	
___ Surface Water Present?	Yes	No	x	Depth (inches)	
___ Water Table Present?	Yes	No	x	Depth (inches)	
___ Saturation Present?	Yes	No	x	Depth (inches)	
				Yes x No	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



Site:	W. Lancaster-S.Baltimore-W.Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	UPL-50		
Client:	AEP		State:	OH		Section, Township, Range:	Sec S11, T 15N, R 19W					
Investigator(s):	N. Houk, N. Barnett				Landform	Moraines		Local Relief	Convex			
Slope (%):	2-5		Lat.	39.793193		Long.	-82.622009		Datum	NAD83		
								NWI Class:	N/A			
Soil Map Unit Name:	Centerburg silt loam, 2 to 6 percent slopes, eroded											
	Climatic/hydrologic conditions typical for time of year?			Y/N	Y							
	Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed					
	Vegetation	N	Soil	N	or Hydrology	N	naturally problematic					
Are Normal Circumstances Present?	Yes			x	No							

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes          No          x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Setaria faberi</i>		70	Y	FACU 4
2.	<i>Zea mays residue</i>		20	Y	UPL 5
3.	<i>Panicum virgatum</i>		5	N	FAC 3
4.	<i>Rubus allegheniensis</i>		5	N	FACU 4
5.					
6.					
7.					
8.					
			100	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 0

Total number of dominant species across all strata: 2

Percent of dominant species that are OBL, FACW, or FAC: 0.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x	1	0
FACW species	0	x	2	0
FAC species	5	x	3	15
FACU species	75	x	4	300
UPL species	20	x	5	100
Total	100			415

Prevalence Index: 4.15

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. \_\_\_\_\_

Dominance Test is >50% \_\_\_\_\_

Prevalence Index is ≤3.0\* \_\_\_\_\_

Morphological Adaptations\* \_\_\_\_\_

Problematic Hydrophytic Vegetation\* \_\_\_\_\_

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	x
_____	_____	_____

Remarks: \_\_\_\_\_

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
		<input type="checkbox"/> Coast Prairie Redox (A16)
		<input type="checkbox"/> Iron-Manganese Masses (F12)
		<input type="checkbox"/> Very Shallow Dark Surface (F12)
		<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Guage or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No x				
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-41  
Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W  
Investigator(s): L. Vine, E.Holt Landform Flood Plains Local Relief Concave  
Slope (%): Lat. 39.774841° Long. -82.628062° Datum NAD83 NWI Class: PEM  
Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	X	No	
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	X	No	
Is the DP within a Wetland?			Yes X No

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 7 Total number of dominant species across all strata: 9 Percent of dominant species that are OBL, FACW, or FAC: 77.78 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 1 FACW species 35 x 2 70 FAC species 30 x 3 90 FACU species 8 x 4 32 UPL species 0 x 5 0 Total 74 193 Prevalence Index: 2.61 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes X No
1.					
2.					
3.					
4.					
5.		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Rubus allegheniensis</i>		5	Y	FACU 4	
2.					
3.					
4.					
5.		5	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Verbena urticifolia</i>		20	Y	FAC 3	
2. <i>Phalaris arundinacea</i>		20	Y	FACW 2	
3. <i>Physostegia virginiana</i>		15	N	FACW 2	
4. <i>Juncus effusus</i>		15	N	OBL 1	
5. <i>Carex frankii</i>		10	N	OBL 1	
6. <i>Juncus tenuis</i>		10	N	FAC 3	
7. <i>Carex muskingumensis</i>		5	N	OBL 1	
8. <i>Setaria faberi</i>		3	N	FACU 4	
		98	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

## SOIL

<b>Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)</b>									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-10	10YR 4/2	95	10YR 4/6	5	C		M	SiL	
10-13	10YR 4/2	85	10YR 4/6	15	C		M	SiL	
13-18	10YR 2/1	100						SiCL	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
Histosol (A1)			Sandy Mucky Mineral (S1)				X	Redox Dark Surface (F6)	
Histic Epipedon (A2)			5cm Mucky Peat or Peat					Depleted Dark Surface (F7)	
Black Histic (A3)			Sandy Gleyed Matrix (S4)					Redox Depressions (F8)	
Hydrogen Sulfide (A4)			Sandy Redox (S5)					<b>Indicators for Problematic Hydric Soils</b>	
Stratified Layers (A5)			Stripped Matrix (S6)					Coast Prairie Redox (A16)	
2 cm Muck (A10)			Loamy Mucky Mineral (F1)					Iron-Manganese Masses (F12)	
Depleted Below Dark Surface (A11)			Loamy Gleyed Matrix (F2)					Very Shallow Dark Surface (F12)	
Thick Dark Surface (A12)			Depleted Matrix (F3)					Other	
<b>Restrictive Layer (if observed):</b> Type: _____					<b>Hydric Soil Present?</b> Yes X No				
Depth (Inches): _____									
Remarks:									

## HYDROLOGY

## Wetland Hydrology Indicators:

<b>Primary Indicators (check all that apply)</b>					<b>Secondary Indicators</b>				
Surface Water (A1)			Water Stained Leaves (B9)		Surface Soil Cracks (B6)				
X High Water Table (A2)			Aquatic Fauna (B13)		Drainage Patterns (B10)				
X Saturation (A3)			True Aquatic Plants (B14)		Dry-Season Water Table (C2)				
Water Marks (B1)			Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)				
Sediment Deposits (B2)			Oxidized Rhizospheres on Living Roots		Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)			Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled Soil (C6)		X Geomorphic Position (D2)				
Iron Deposits (B5)			Thin Muck Surface (C7)		X FAC-Neutral Test (D5)				
Inundation Visible on Aerial Imagery (B7)			Gauge or Well Data (D9)						
Sparsely Vegetated Concave Surface			Other						
<b>Field Observations:</b> Surface Water Present? Yes No X					<b>Hydrology Indicators Present?</b>				
Water Table Present? Yes X No					Yes X No				
Saturation Present? Yes X No									
Depth (inches) _____									
Depth (inches) 14									
Depth (inches) 14									

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-41  
Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W  
Investigator(s): L. Vine, E.Holt Landform Flood Plains Local Relief Convex  
Slope (%): Lat. 39.774898° Long. -82.628027° Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No		Is the DP within a Wetland? Yes No
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	No	X	

## VEGETATION

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b>			
						Number of dominant species that are OBL, FACW, or FAC: 3			
1. _____						Total number of dominant species across all strata: 8			
2. _____						Percent of dominant species that are OBL, FACW, or FAC: 37.50			
3. _____									
4. _____									
5. _____									
			0	Total Cover					
Shrub Stratum		Plot size: 15'				<b>Prevalence Index Worksheet</b>			
						Total % cover of:			
1. <i>Rubus allegheniensis</i>						OBL species	1	x 1	1
2. <i>Rubus occidentalis</i>						FACW species	0	x 2	0
3. <i>Elaeagnus angustifolia</i>						FAC species	10	x 3	30
4. _____						FACU species	90	x 4	360
5. _____						UPL species	15	x 5	75
			25	Total Cover		Total	116		466
						Prevalence Index: 4.02			
Herb Stratum		Plot size: 5'				<b>Hydrophytic Vegetation Indicators:</b>			
1. <i>Schedonorus arundinaceus</i>						Rapid Test for Hydrophytic Veg.			
2. <i>Brassica rapa</i>						Dominance Test is >50%			
3. <i>Plantago major</i>						Prevalence Index is ≤3.0*			
4. <i>Carex frankii</i>						Morphological Adaptations*			
5. _____						Problematic Hydrophytic Vegetation*			
6. _____									
7. _____									
8. _____									
			100	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
Woody Vine Stratum		Plot size: 30'				<b>Hydrophytic Vegetation Present?</b>			
1. _____						Yes	No	X	
2. _____									
			0	Total Cover					
Remarks:									

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix		Redox Features						
	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-6	10YR 3/3	100					SaSiL		
6-9	10YR 4/2	96	10YR 5/6	4	C	M	SaSiL		
9-18	10YR 3/3	100					SaSiL		
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    **Location: PL=Pore Lining, M=Matrix									
Hydric Soil Indicators:									
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input checked="" type="checkbox"/> X	Redox Dark Surface (F6)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> 5cm Mucky Peat or Peat			<input type="checkbox"/>	Depleted Dark Surface (F7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/>	Redox Depressions (F8)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (F12) <input type="checkbox"/> Other			
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Stripped Matrix (S6)						
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Mucky Mineral (F1)						
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)						
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Matrix (F3)						
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> X    No			
Remarks: _____									

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)					Secondary Indicators			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Guage or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No X			
Water Table Present? Yes No x Depth (inches)								
Saturation Present? Yes No x Depth (inches)								

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: WL-41A  
 Client: AEP State: OH Section, Township, Range: \_\_\_\_\_  
 Investigator(s): L. Vine, E.Holt Landform \_\_\_\_\_ Flood Plains \_\_\_\_\_ Local Relief \_\_\_\_\_ Concave \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat. 39.774189° Long. -82.628267° Datum NAD83 NWI Class: PEM  
 Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No \_\_\_\_\_

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the DP within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>8</u> Total number of dominant species across all strata: <u>8</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>40</u> x <u>2</u> = <u>80</u> FAC species <u>25</u> x <u>3</u> = <u>75</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>66</u> = <u>156</u> Prevalence Index: <u>2.36</u> <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <u>Carex vulpinoidea</u>		20	Y	FACW	2
2. <u>Apocynum cannabinum</u>		15	N	FAC	3
3. <u>Carex muskingumensis</u>		10	N	OBL	1
4. <u>Epilobium coloratum</u>		10	N	OBL	1
5. <u>Cinna arundinacea</u>		10	N	FACW	2
6. <u>Poa pratensis</u>		10	N	FAC	3
7. <u>Symphotrichum lateriflorum</u>		10	N	FACW	2
8. <u>Lycopus americanus</u>		5	N	OBL	1
		90	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. _____					
2. _____					
		0	Total Cover		
Remarks:					

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-2	10YR 4/2	100						SiL	
2-18	10YR2/1	97	10YR 4/6	3	C		M	SiCL	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)						_____ X	Redox Dark Surface (F6)	
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat						_____	Depleted Dark Surface (F7)	
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)						_____	Redox Depressions (F8)	
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)						_____	<b>Indicators for Problematic Hydric Soils</b>	
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)						_____	Coast Prairie Redox (A16)	
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)						_____	Iron-Manganese Masses (F12)	
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)						_____	Very Shallow Dark Surface (F12)	
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)						_____	Other	
<b>Restrictive Layer (if observed):</b> Type: _____									
Depth (Inches): _____									
<b>Hydric Soil Present?</b> Yes <u>X</u> No _____									
Remarks:									

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____	_____	_____ Surface Soil Cracks (B6)	_____
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____	_____	_____ Drainage Patterns (B10)	_____
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____	_____	_____ Dry-Season Water Table (C2)	_____
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____	_____	_____ Crayfish Burrows (C8)	_____
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____	_____	_____ Saturation Visible on Aerial Imagery (C9)	_____
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____	_____	_____ Stunted or Stressed Plants (D1)	_____
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	_____	_____	_____ x Geomorphic Position (D2)	_____
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____	_____	_____ x FAC-Neutral Test (D5)	_____
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)	_____	_____		
_____ Sparsely Vegetated Concave Surface	_____ Other	_____	_____		
<b>Field Observations:</b>	Surface Water Present? Yes _____ No <u>x</u>	Depth (inches)	_____	<b>Hydrology Indicators Present?</b>	
	Water Table Present? Yes _____ No <u>x</u>	Depth (inches)	_____	Yes <u>X</u> No _____	
	Saturation Present? Yes _____ No <u>x</u>	Depth (inches)	_____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



# WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: UPL-41A  
 Client: AEP State: OH Section, Township, Range: \_\_\_\_\_  
 Investigator(s): L. Vine, E.Holt Landform Flood Plains Local Relief Convex  
 Slope (%): \_\_\_\_\_ Lat. 39.774139° Long. -82.628196° Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Aetna silt loam, fan, occasionally flooded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No \_\_\_\_\_

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the DP within a Wetland? Yes <u>No</u> <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>60.00</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>1</u> x <u>1</u> = <u>1</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>65</u> x <u>4</u> = <u>260</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>86</u> Prevalence Index: <u>3.62</u> <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <u>Setaria faberi</u>		60	Y	FACU 4	
2. <u>Carex frankii</u>		15	N	OBL 1	
3. <u>Verbena urticifolia</u>		10	N	FAC 3	
4. <u>Euthamia graminifolia</u>		10	N	FACW 2	
5. <u>Solidago canadensis</u>		5	N	FACU 4	
6. _____					
7. _____					
8. _____					
		100	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. _____					
2. _____					
		0	Total Cover		
Remarks: _____					

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 3/2	100						SiCL	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)				_____ Redox Dark Surface (F6)				
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat				_____ Depleted Dark Surface (F7)				
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)				_____ Redox Depressions (F8)				
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)				<b>Indicators for Problematic Hydric Soils</b>				
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)				_____ Coast Prairie Redox (A16)				
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)				_____ Iron-Manganese Masses (F12)				
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)				_____ Very Shallow Dark Surface (F12)				
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)				_____ Other				
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____						<b>Hydric Soil Present?</b> Yes <u>No</u> <u>X</u>			
Remarks: _____									

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (check all that apply)					Secondary Indicators		
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____ Surface Soil Cracks (B6)					
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)					
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____ Dry-Season Water Table (C2)					
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)					
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____ Saturation Visible on Aerial Imagery (C9)					
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)					
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	_____ Geomorphic Position (D2)					
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ FAC-Neutral Test (D5)					
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)						
_____ Sparsely Vegetated Concave Surface	_____ Other						
<b>Field Observations:</b>	Surface Water Present? Yes _____ No <u>X</u>	Depth (inches) _____					
	Water Table Present? Yes <u>X</u> No _____	Depth (inches) <u>16</u>					
	Saturation Present? Yes _____ No <u>X</u>	Depth (inches) _____					
			<b>Hydrology Indicators Present?</b> Yes <u>No</u> <u>X</u>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
<b>No hydric indicators</b>							



# WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S.Baltimore-W.Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: WL-18  
 Client: AEP State: OH Section, Township, Range: Sec S35, T 15N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Concave  
 Slope (%): Lat. 39.729007 Long. -82.633563 Datum NAD83 NWI Class: PEM  
 Soil Map Unit Name: Aetna silt loam, occasionally flooded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No   

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u>x</u> No <u>  </u>	Is the DP within a Wetland? Yes <u>x</u> No <u>  </u>
Hydric Soil Present? Yes <u>x</u> No <u>  </u>	
Wetland Hydrology Present? Yes <u>x</u> No <u>  </u>	
Remarks: <u>  </u>	

## VEGETATION

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet			
1. _____						Number of dominant species that are OBL, FACW, or FAC:		1	
2. _____						Total number of dominant species across all strata:		1	
3. _____						Percent of dominant species that are OBL, FACW, or FAC:		100.00	
4. _____						Prevalence Index Worksheet			
5. _____						Total % cover of:			
			0	Total Cover		OBL species	0 x 1	0	
						FACW species	98 x 2	196	
						FAC species	2 x 3	6	
						FACU species	0 x 4	0	
						UPL species	0 x 5	0	
						Total	100	202	
						Prevalence Index: 2.02			
						Hydrophytic Vegetation Indicators:			
						Rapid Test for Hydrophytic Veg.			
						x	Dominance Test is >50%		
						x	Prevalence Index is ≤3.0*		
						Morphological Adaptations*			
						Problematic Hydrophytic Vegetation*			
			100	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
						Hydrophytic Vegetation Present?			
						Yes	x	No	

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Color	Matrix	%	Color	%	Type*	Loc**	Redox Features	Texture
0-5	10YR 3/2		95	10YR 5/6	5	C		M	Si C L
5-18	10YR 4/2		95	10YR 5/6	5	C		M	Si C L
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									

Hydric Soil Indicators:			
<u>  </u> Histosol (A1)	<u>  </u> Sandy Mucky Mineral (S1)	<u>x</u>	Redox Dark Surface (F6)
<u>  </u> Histic Epipedon (A2)	<u>  </u> 5cm Mucky Peat or Peat	<u>  </u>	Depleted Dark Surface (F7)
<u>  </u> Black Histic (A3)	<u>  </u> Sandy Gleyed Matrix (S4)	<u>  </u>	Redox Depressions (F8)
<u>  </u> Hydrogen Sulfide (A4)	<u>  </u> Sandy Redox (S5)	<u>  </u>	<b>Indicators for Problematic Hydric Soils</b> Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other
<u>  </u> Stratified Layers (A5)	<u>  </u> Stripped Matrix (S6)	<u>  </u>	
<u>  </u> 2 cm Muck (A10)	<u>  </u> Loamy Mucky Mineral (F1)	<u>  </u>	
<u>  </u> Depleted Below Dark Surface (A11)	<u>  </u> Loamy Gleyed Matrix (F2)	<u>  </u>	
<u>  </u> Thick Dark Surface (A12)	<u>  </u> Depleted Matrix (F3)	<u>  </u>	

Restrictive Layer (if observed): Type: _____	Hydric Soil Present?      Yes    x    No
Depth (Inches): _____	
Remarks: _____	

## HYDROLOGY

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)				<input type="checkbox"/> Surface Soil Cracks (B6)				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)				<input type="checkbox"/> Drainage Patterns (B10)				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)				<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)				<input type="checkbox"/> Crayfish Burrows (C8)				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots				<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)				<input type="checkbox"/> Stunted or Stressed Plants (D1)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)				<input checked="" type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)				<input checked="" type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other								
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) <input type="text"/>					<b>Hydrology Indicators Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) <input type="text"/>									
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) <input type="text"/>									
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S.Baltimore-W.Millersport		City/County:	Fairfield County		Date:	28 March 2024		Data Point:	UPL-18		
Client:	AEP		State:	OH		Section, Township, Range:	Sec S35, T 15N, R 19W					
Investigator(s):	N. Houk, N. Barnett				Landform	Flood Plains		Local Relief	Convex			
Slope (%):		Lat.	39.728973		Long.	-82.633588		Datum	NAD83		NWI Class:	N/A
Soil Map Unit Name:	Aetna silt loam, occasionally flooded											
Climatic/hydrologic conditions typical for time of year?				Y/N	Y							
Vegetation		N	Soil	N	or Hydrology	N	significantly disturbed					
Vegetation		N	Soil	N	or Hydrology	N	naturally problematic					
Are Normal Circumstances Present?				Yes	x	No						

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes          No          x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status				
1.						<b>Dominance Test Worksheet</b>			
2.						Number of dominant species that are OBL, FACW, or FAC: 1			
3.						Total number of dominant species across all strata: 3			
4.						Percent of dominant species that are OBL, FACW, or FAC: 33.33			
5.			0	Total Cover		<b>Prevalence Index Worksheet</b>			
						Total % cover of:			
						OBL species	0	x 1	0
						FACW species	55	x 2	110
						FAC species	2	x 3	6
						FACU species	75	x 4	300
						UPL species	0	x 5	0
						Total	132		416
						Prevalence Index: 3.15			
						<b>Hydrophytic Vegetation Indicators:</b>			
						Rapid Test for Hydrophytic Veg.			
						Dominance Test is >50%			
						Prevalence Index is ≤3.0*			
						Morphological Adaptations*			
						Problematic Hydrophytic Vegetation*			
						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
						<b>Hydrophytic Vegetation Present?</b>			
						Yes	No	x	
Shrub Stratum		Plot size: 15'							
1.	<i>Catalpa speciosa</i>		50	Y	FACU	4			
2.	<i>Rosa multiflora</i>		15	Y	FACU	4			
3.	<i>Crataegus crus-galli</i>		2	N	FAC	3			
4.									
5.			67	Total Cover					
Herb Stratum		Plot size: 5'							
1.	<i>Elymus virginicus</i>		50	Y	FACW	2			
2.	<i>Taraxacum officinale</i>		10	N	FACU	4			
3.	<i>Phalaris arundinacea</i>		5	N	FACW	2			
4.									
5.									
6.									
7.									
8.			65	Total Cover					
Woody Vine Stratum		Plot size: 30'							
1.									
2.									
			0	Total Cover					
Remarks:									

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
		<input type="checkbox"/> Coast Prairie Redox (A16)
		<input type="checkbox"/> Iron-Manganese Masses (F12)
		<input type="checkbox"/> Very Shallow Dark Surface (F12)
		<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No x				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 33A  
 Client: AEP State: OH Section, Township, Range: Sec S6, T 16N, R 18W  
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex  
 Slope (%): 1-3 Lat. 39.887537 Long. -82.567358 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

## VEGETATION

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet									
1.						Number of dominant species that are OBL, FACW, or FAC:		0							
2.						Total number of dominant species across all strata:		2							
3.						Percent of dominant species that are OBL, FACW, or FAC:		0.00							
4.						Prevalence Index Worksheet									
5.			0	Total Cover		Total % cover of:									
Shrub Stratum						Plot size: 15'									
						1.	<i>Rubus allegheniensis</i>	50	Y	FACU	4	OBL species	0	x 1	0
						2.	<i>Ligustrum vulgare</i>	5	N	FACU	4	FACW species	0	x 2	0
						3.						FAC species	10	x 3	30
						4.						FACU species	97	x 4	388
5.			55	Total Cover							UPL species	2	x 5	10	
Herb Stratum						Plot size: 5'				Total		109		428	
						1.	<i>Solidago canadensis</i>	40	Y	FACU	4	Prevalence Index: 3.93			
						2.	<i>Poa pratensis</i>	10	N	FAC	3	Hydrophytic Vegetation Indicators:			
						3.	<i>Cirsium arvense</i>	2	N	FACU	4	Rapid Test for Hydrophytic Veg.			
						4.	<i>Daucus carota</i>	2	N	UPL	5	Dominance Test is >50%			
5.						Prevalence Index is ≤3.0*									
6.						Morphological Adaptations*									
7.						Problematic Hydrophytic Vegetation*									
8.			54	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic									
Woody Vine Stratum						Plot size: 30'				Hydrophytic Vegetation Present?					
						1.						Yes	No	x	
						2.									
Remarks:															

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    **Location: PL=Pore Lining, M=Matrix								
Hydric Soil Indicators:								
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> 5cm Mucky Peat or Peat			<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils</b>		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> 2 cm Muck (A10)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Very Shallow Dark Surface (F12)		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Other		
<b>Restrictive Layer (if observed):</b> Type: _____								
Depth (Inches): _____								
Remarks: _____						<b>Hydric Soil Present?</b>		
						<b>Yes          No          x</b>		

## HYDROLOGY

Wetland Hydrology Indicators:							
Primary Indicators (check all that apply)					Secondary Indicators		
_____	Surface Water (A1)	_____	Water Stained Leaves (B9)	_____	_____	Surface Soil Cracks (B6)	_____
_____	High Water Table (A2)	_____	Aquatic Fauna (B13)	_____	_____	Drainage Patterns (B10)	_____
_____	Saturation (A3)	_____	True Aquatic Plants (B14)	_____	_____	Dry-Season Water Table (C2)	_____
_____	Water Marks (B1)	_____	Hydrogen Sulfide Odor (C1)	_____	_____	Crayfish Burrows (C8)	_____
_____	Sediment Deposits (B2)	_____	Oxidized Rhizospheres on Living Roots	_____	_____	Saturation Visible on Aerial Imagery (C9)	_____
_____	Drift Deposits (B3)	_____	Presence of Reduced Iron (C4)	_____	_____	Stunted or Stressed Plants (D1)	_____
_____	Algal Mat or Crust (B4)	_____	Recent Iron Reduction in Tilled Soil (C6)	_____	_____	Geomorphic Position (D2)	_____
_____	Iron Deposits (B5)	_____	Thin Muck Surface (C7)	_____	_____	FAC-Neutral Test (D5)	_____
_____	Inundation Visible on Aerial Imagery (B7)	_____	Gauge or Well Data (D9)	_____	_____		
_____	Sparsely Vegetated Concave Surface	_____	Other	_____			
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches)							
Water Table Present? Yes No x Depth (inches)							
Saturation Present? Yes No x Depth (inches)							
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:							



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 33  
 Client: AEP State: OH Section, Township, Range: Sec S6, T 16N, R 18W  
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex  
 Slope (%): 1-3 Lat. 39.886661 Long. -82.567648 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Barbarea vulgaris</i>		40	Y	FAC	3
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
		40	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-14	10YR 3/1	100					Si C L	
14-18	10YR 3/1	95	10YR 5/6	5			Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____ Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes

No

x

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
_____ Water Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soil (C6)	
_____ Thin Muck Surface (C7)	
_____ Gauge or Well Data (D9)	
_____ Other	

Field Observations: Surface Water Present? Yes No x

Water Table Present? Yes No x

Saturation Present? Yes No x

Depth (inches)

Depth (inches)

Depth (inches)

Hydrology Indicators Present?

Yes

No

x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 31  
 Client: AEP State: OH Section, Township, Range: Sec S6, T 16N, R 18W  
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex  
 Slope (%): 1-3 Lat. 39.884459 Long. -82.569989 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Pewamo silty clay loam, low caronate till, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u></u> No <u>x</u>	Is the DP within a Wetland? Yes <u></u> No <u>x</u>
Hydric Soil Present? Yes <u></u> No <u>x</u>	
Wetland Hydrology Present? Yes <u></u> No <u>x</u>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	
1. <u></u>					<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>2</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u>
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>					
		<u>0</u>	Total Cover		
Shrub Stratum	Plot size: <u>15'</u>				
1. <u></u>					<b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>5</u> x <u>2</u> = <u>10</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>7</u> x <u>4</u> = <u>28</u> UPL species <u>88</u> x <u>5</u> = <u>440</u> Total <u>100</u> Prevalence Index: <u>4.78</u>
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>					
		<u>0</u>	Total Cover		
Herb Stratum	Plot size: <u>5'</u>				
1. <u>Lamium purpureum</u>		<u>48</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	<b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u></u> No <u></u> x <u></u>
2. <u>Zea mays residue</u>		<u>40</u>	<u>Y</u>	<u>UPL</u> <u>5</u>	
3. <u>Conium maculatum</u>		<u>5</u>	<u>N</u>	<u>FACW</u> <u>2</u>	
4. <u>Stellaria media</u>		<u>5</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
5. <u>Allium vineale</u>		<u>2</u>	<u>N</u>	<u>FACU</u> <u>4</u>	
6. <u></u>					
7. <u></u>					
8. <u></u>					
		<u>100</u>	Total Cover		
Woody Vine Stratum	Plot size: <u>30'</u>				
1. <u></u>					
2. <u></u>					
		<u>0</u>	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/1	100					C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

<u></u> Histosol (A1)	<u></u> Sandy Mucky Mineral (S1)	<u></u> Redox Dark Surface (F6)
<u></u> Histic Epipedon (A2)	<u></u> 5cm Mucky Peat or Peat	<u></u> Depleted Dark Surface (F7)
<u></u> Black Histic (A3)	<u></u> Sandy Gleyed Matrix (S4)	<u></u> Redox Depressions (F8)
<u></u> Hydrogen Sulfide (A4)	<u></u> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b> Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Very Shallow Dark Surface (F12) Other
<u></u> Stratified Layers (A5)	<u></u> Stripped Matrix (S6)	
<u></u> 2 cm Muck (A10)	<u></u> Loamy Mucky Mineral (F1)	
<u></u> Depleted Below Dark Surface (A11)	<u></u> Loamy Gleyed Matrix (F2)	
<u></u> Thick Dark Surface (A12)	<u></u> Depleted Matrix (F3)	

Restrictive Layer (if observed): Type: Depth (Inches): Hydric Soil Present? Yes  No  x 

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u></u> Surface Water (A1) <u></u> High Water Table (A2) <u></u> Saturation (A3) <u></u> Water Marks (B1) <u></u> Sediment Deposits (B2) <u></u> Drift Deposits (B3) <u></u> Algal Mat or Crust (B4) <u></u> Iron Deposits (B5) <u></u> Inundation Visible on Aerial Imagery (B7) <u></u> Sparsely Vegetated Concave Surface	<u></u> Water Stained Leaves (B9) <u></u> Aquatic Fauna (B13) <u></u> True Aquatic Plants (B14) <u></u> Hydrogen Sulfide Odor (C1) <u></u> Oxidized Rhizospheres on Living Roots <u></u> Presence of Reduced Iron (C4) <u></u> Recent Iron Reduction in Tilled Soil (C6) <u></u> Thin Muck Surface (C7) <u></u> Gauge or Well Data (D9) <u></u> Other
<b>Field Observations:</b> Surface Water Present? Yes <u></u> No <u>x</u> Depth (inches) Water Table Present? Yes <u></u> No <u>x</u> Depth (inches) Saturation Present? Yes <u></u> No <u>x</u> Depth (inches)	<b>Hydrology Indicators Present?</b> Yes <u></u> No <u></u> x <u></u>

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 28  
 Client: AEP State: OH Section, Township, Range: Sec S7, T 16N, R 18W  
 Investigator(s): N. Houk, N. Barnett Landform Drainageways Local Relief Convex  
 Slope (%): 1-3 Lat. 39.877952 Long. -82.574087 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u></u> No <u>x</u>	Is the DP within a Wetland? Yes <u></u> No <u>x</u>
Hydric Soil Present? Yes <u></u> No <u>x</u>	
Wetland Hydrology Present? Yes <u></u> No <u>x</u>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>60</u> x <u>5</u> = <u>300</u> Total <u>60</u> Prevalence Index: <u>5.00</u>
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <u>Glycine max residue</u>		60	Y	UPL 5	
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>					
6. <u></u>					
7. <u></u>					
8. <u></u>		60	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. <u></u>					
2. <u></u>					
		0	Total Cover		

Remarks:

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

<u></u> Histosol (A1)	<u></u> Sandy Mucky Mineral (S1)	<u></u> Redox Dark Surface (F6)
<u></u> Histic Epipedon (A2)	<u></u> 5cm Mucky Peat or Peat	<u></u> Depleted Dark Surface (F7)
<u></u> Black Histic (A3)	<u></u> Sandy Gleyed Matrix (S4)	<u></u> Redox Depressions (F8)
<u></u> Hydrogen Sulfide (A4)	<u></u> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<u></u> Stratified Layers (A5)	<u></u> Stripped Matrix (S6)	<u></u> Coast Prairie Redox (A16)
<u></u> 2 cm Muck (A10)	<u></u> Loamy Mucky Mineral (F1)	<u></u> Iron-Manganese Masses (F12)
<u></u> Depleted Below Dark Surface (A11)	<u></u> Loamy Gleyed Matrix (F2)	<u></u> Very Shallow Dark Surface (F12)
<u></u> Thick Dark Surface (A12)	<u></u> Depleted Matrix (F3)	<u></u> Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes

No

x

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
<u></u> Surface Water (A1)	<u></u> Surface Soil Cracks (B6)
<u></u> High Water Table (A2)	<u></u> Drainage Patterns (B10)
<u></u> Saturation (A3)	<u></u> Dry-Season Water Table (C2)
<u></u> Water Marks (B1)	<u></u> Crayfish Burrows (C8)
<u></u> Sediment Deposits (B2)	<u></u> Saturation Visible on Aerial Imagery (C9)
<u></u> Drift Deposits (B3)	<u></u> Stunted or Stressed Plants (D1)
<u></u> Algal Mat or Crust (B4)	<u></u> Geomorphic Position (D2)
<u></u> Iron Deposits (B5)	<u></u> FAC-Neutral Test (D5)
<u></u> Inundation Visible on Aerial Imagery (B7)	
<u></u> Sparsely Vegetated Concave Surface	
<u></u> Water Stained Leaves (B9)	
<u></u> Aquatic Fauna (B13)	
<u></u> True Aquatic Plants (B14)	
<u></u> Hydrogen Sulfide Odor (C1)	
<u></u> Oxidized Rhizospheres on Living Roots	
<u></u> Presence of Reduced Iron (C4)	
<u></u> Recent Iron Reduction in Tilled Soil (C6)	
<u></u> Thin Muck Surface (C7)	
<u></u> Gauge or Well Data (D9)	
<u></u> Other	

**Field Observations:** Surface Water Present? Yes  No x Depth (inches)  
 Water Table Present? Yes  No x Depth (inches)  
 Saturation Present? Yes  No x Depth (inches)

Hydrology Indicators Present?

Yes

No

x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	27 March 2024	Data Point:	25
Client:	AEP	State:	OH	Section, Township, Range:	Sec S7, T 16N, R 18W		
Investigator(s):	N. Houk, N. Barnett	Landform		Drainageways	Local Relief	Convex	
Slope (%):	1-3	Lat.	39.871979	Long.	-82.576534	Datum	NAD83
Soil Map Unit Name:	Pewamo silty clay loam, low caronate till, 0 to 2 percent slopes						
Climatic/hydrologic conditions typical for time of year?	Y/N	Y					
Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed	
Vegetation	N	Soil	N	or Hydrology	N	naturally problematic	
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes	_____	No	<u>  x  </u>	Is the DP within a Wetland? Yes            No            x
Hydric Soil Present? Yes	_____	No	<u>  x  </u>	
Wetland Hydrology Present? Yes	_____	No	<u>  x  </u>	
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.	<i>Rubus allegheniensis</i>		5	Y	FACU 4
2.	<i>Rosa multiflora</i>		3	N	FACU 4
3.					
4.					
5.					
			8	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Conium maculatum</i>		30	Y	FACW 2
2.	<i>Lamium purpureum</i>		30	Y	UPL 5
3.	<i>Cyperus esculentus</i>		20	Y	FACW 2
4.	<i>Stellaria media</i>		10	N	FACU 4
5.					
6.					
7.					
8.					
			90	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	

### Dominance Test Worksheet

Number of dominant species 2

that are OBL, FACW, or FAC: 2

Total number of dominant species across all strata: 4

Percent of dominant species that are OBL, FACW, or FAC: 50.00

### Prevalence Index Worksheet

Total % cover of:

OBL species	0 x 1	0
FACW species	50 x 2	100
FAC species	0 x 3	0
FACU species	18 x 4	72
UPL species	30 x 5	150
Total	98	322

Prevalence Index: 3.29

### Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg.

Dominance Test is >50%

Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

### Hydrophytic Vegetation Present?

Yes	No	x
-----	----	---

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Matrix		Redox Features						
	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-18	10YR 3/2	100						Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
<input type="checkbox"/>	Surface Water Present?	Yes	No	x	Depth (inches)				
<input type="checkbox"/>	Water Table Present?	Yes	No	x	Depth (inches)				
<input type="checkbox"/>	Saturation Present?	Yes	No	x	Depth (inches)				
<b>Hydrology Indicators Present?</b>									
					<b>Yes      No      x</b>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	22	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S18, T 16N, R 18W		
Investigator(s):	N. Houk, N. Barnett		Landform			Moraines		Local Relief		Convex	
Slope (%):	1-3		Lat.	39.866541		Long.	-82.578898		Datum	NAD83	
Soil Map Unit Name:			Bennington silt loam, 0 to 2 percent slopes								
Climatic/hydrologic conditions typical for time of year?			Y/N		Y						
Vegetation			N		or Hydrology		N significantly disturbed				
Vegetation			N		or Hydrology		N naturally problematic				
Are Normal Circumstances Present?			Yes		x		No				

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.				
2.				
3.				
4.				
5.				
		0	Total Cover	
Shrub Stratum	Plot size: 15'			
1.				
2.				
3.				
4.				
5.				
		0	Total Cover	
Herb Stratum	Plot size: 5'			
1.	<i>Glycine max residue</i>	40	Y	UPL 5
2.	<i>Barbarea vulgaris</i>	20	Y	FAC 3
3.	<i>Stellaria media</i>	20	Y	FACU 4
4.	<i>Allium vineale</i>	5	N	FACU 4
5.				
6.				
7.				
8.				
		85	Total Cover	
Woody Vine Stratum	Plot size: 30'			
1.				
2.				
		0	Total Cover	
Remarks:				

### Dominance Test Worksheet

Number of dominant species that are OBL, FACW, or FAC: 1

Total number of dominant species across all strata: 3

Percent of dominant species that are OBL, FACW, or FAC: 33.33

### Prevalence Index Worksheet

Total % cover of:

OBL species	0 x 1	0
FACW species	0 x 2	0
FAC species	20 x 3	60
FACU species	25 x 4	100
UPL species	40 x 5	200
Total	85	360

Prevalence Index: 4.24

### Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Veg.

Dominance Test is >50%

Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

### Hydrophytic Vegetation Present?

Yes	No	x
-----	----	---

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si L	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    **Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators:</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)					<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat					<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)					<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)					<b>Indicators for Problematic Hydric Soils</b>		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)					<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					<input type="checkbox"/> Very Shallow Dark Surface (F12)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)					<input type="checkbox"/> Other		
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____						<b>Hydric Soil Present?</b>		
Remarks: _____						<b>Yes</b>	<b>No</b>	<b>x</b>

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other			
<b>Field Observations:</b>	Surface Water Present?	Yes	No	x
	Water Table Present?	Yes	No	x
	Saturation Present?	Yes	No	x
<b>Hydrology Indicators Present?</b>				
		Yes	No	x
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				



Site: <u>W. Lancaster-S. Baltimore-W. Millersport</u>		City/County: <u>Fairfield County</u>		Date: <u>27 March 2024</u>	Data Point: <u>19</u>
Client: <u>AEP</u>		State: <u>OH</u>	Section, Township, Range: <u>Sec S18, T 16N, R 18W</u>		
Investigator(s): <u>N. Houk, N. Barnett</u>		Landform		<u>Moraines</u>	Local Relief
Slope (%): <u>1-3</u>		Lat. <u>39.860215</u>	Long. <u>-82.581483</u>	Datum <u>NAD83</u>	NWI Class: <u>Convex</u>
Soil Map Unit Name: <u>Bennington silt loam, 0 to 2 percent slopes</u>					
Climatic/hydrologic conditions typical for time of year?			Y/N	Y	
Vegetation <u>N</u> , Soil <u>N</u>		or Hydrology <u>N</u>		significantly disturbed	
Vegetation <u>N</u> , Soil <u>N</u>		or Hydrology <u>N</u>		naturally problematic	
Are Normal Circumstances Present?		Yes	<u>x</u>	No	

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1. _____					Number of dominant species that are OBL, FACW <sub>1</sub> or FAC:	0	
2. _____					Total number of dominant species across all strata:	2	
3. _____					Percent of dominant species that are OBL, FACW, or FAC:	0.00	
4. _____					<b>Prevalence Index Worksheet</b>		
5. _____		0	Total Cover		Total % cover of:		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				OBL species	0 x 1 = 0	
1. _____					FACW species	0 x 2 = 0	
2. _____					FAC species	5 x 3 = 15	
3. _____					FACU species	20 x 4 = 80	
4. _____					UPL species	70 x 5 = 350	
5. _____		0	Total Cover		Total	95 = 445	
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				Prevalence Index:	4.68	
1. <i>Zea mays</i> residue		70	Y	UPL 5	<b>Hydrophytic Vegetation Indicators:</b>		
2. <i>Stellaria media</i>		20	Y	FACU 4	Rapid Test for Hydrophytic Veg.		
3. <i>Barbarea vulgaris</i>		5	N	FAC 3	Dominance Test is >50%		
4. _____					Prevalence Index is <3.0*		
5. _____					Morphological Adaptations*		
6. _____					Problematic Hydrophytic Vegetation*		
7. _____					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
8. _____		95	Total Cover		<b>Hydrophytic Vegetation Present?</b>		
<b>Woody Vine Stratum</b>	<b>Plot size: 5'</b>				Yes	No	
1. _____					x		
2. _____							
		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>		
	<b>Yes</b>	<b>No</b>	<b>x</b>
Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      x				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	16		
Client:	AEP		State:	OH		Section, Township, Range:			Sec S19, T 16N, R 18W			
Investigator(s):	N. Houk, N. Barnett				Landform	Flood Plains	Local Relief	Convex				
Slope (%):	1-3		Lat.	39.854232		Long.	-82.583901		Datum	NAD83	NWI Class:	N/A
Soil Map Unit Name: Aetna silt loam, occasionally flooded												
Climatic/hydrologic conditions typical for time of year? Y/N Y												
Vegetation N, Soil N or Hydrology N significantly disturbed												
Vegetation N, Soil N or Hydrology N naturally problematic												
Are Normal Circumstances Present? Yes x No												

Hydrophytic Vegetation Present? Yes	<u>  x  </u>	No	<u>          </u>	<b>Is the DP within a Wetland?</b> <b>Yes            No            x</b>
Hydric Soil Present? Yes	<u>          </u>	No	<u>      x      </u>	
Wetland Hydrology Present? Yes		No	<u>      x      </u>	
Remarks:				

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet			
1.					Number of dominant species			
2.					that are OBL, FACW, or FAC:			
3.					Total number of dominant			
4.					species across all strata:			
5.					Percent of dominant species			
		0	Total Cover		that are OBL, FACW, or FAC:			
<u>Shrub Stratum</u>	Plot size: 15'				Prevalence Index Worksheet			
1.					Total % cover of:			
2.					OBL species			
3.					FACW species			
4.					FAC species			
5.					FACU species			
		0	Total Cover		UPL species			
<u>Herb Stratum</u>	Plot size: 5'				Total			
1. <i>Phalaris arundinacea</i>		45	Y	FACW	2	Prevalence Index:		
2. <i>Apocynum cannabinum</i>		20	Y	FAC	3	Rapid Test for Hydrophytic Veg.		
3. <i>Echinacea pallida</i>		10	N	UPL	5	Dominance Test is >50%		
4. <i>Allium vineale</i>		5	N	FACU	4	Prevalence Index is ≤3.0*		
5.						Morphological Adaptations*		
6.						Problematic Hydrophytic Vegetation*		
7.						*Indicators of hydric soil and wetland		
8.						hydrology must be present, unless		
		80	Total Cover			disturbed or problematic		
<u>Woody Vine Stratum</u>	Plot size: 30'				Hydrophytic Vegetation Present?			
1.					Yes x No			
2.								
		0	Total Cover					
Remarks:								

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture Si C L	Remarks
0-18	10YR 3/2	100						

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>			
	Yes	No	x	

Remarks: _____
----------------

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
Field Observations:					Hydrology Indicators Present?				
	Surface Water Present?	Yes	No	x	Depth (inches)				
	Water Table Present?	Yes	No	x	Depth (inches)				
	Saturation Present?	Yes	No	x	Depth (inches)				
						Yes	No	x	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 14  
 Client: AEP State: OH Section, Township, Range: Sec S19, T 16N, R 18W  
 Investigator(s): N. Houk, N. Barnett Landform Lake Plains Local Relief Convex  
 Slope (%): 1-3 Lat. 39.851571 Long. -82.584979 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	
Hydric Soil Present? Yes	x	No	
Wetland Hydrology Present? Yes	No	x	
Is the DP within a Wetland?			Yes No x

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1.	<i>Glycine max residue</i>	60	Y	UPL	5
2.	<i>Lolium multiflorum</i>	30	Y	UPL	5
3.					
4.					
5.					
6.					
7.					
8.					
		90	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 0

Total number of dominant species across all strata: 2

Percent of dominant species that are OBL, FACW, or FAC: 0.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x	1	0
FACW species	0	x	2	0
FAC species	0	x	3	0
FACU species	0	x	4	0
UPL species	90	x	5	450
Total	90			450

Prevalence Index: 5.00

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. Dominance Test is >50%  
 Prevalence Index is ≤3.0\*  
 Morphological Adaptations\*  
 Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**  
 Yes No x

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-4	10YR 2/2	100					C L	
4-18	10YR 2/2	95	10YR 4/6	5	C	M	C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

Histosol (A1)	Sandy Mucky Mineral (S1)	x	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat		Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)		<b>Indicators for Problematic Hydric Soils</b>
Stratified Layers (A5)	Stripped Matrix (S6)		Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)		Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)		Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)		Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes x No

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	Surface Soil Cracks (B6)
High Water Table (A2)	Drainage Patterns (B10)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Geomorphic Position (D2)
Iron Deposits (B5)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface	
Water Stained Leaves (B9)	
Aquatic Fauna (B13)	
True Aquatic Plants (B14)	
Hydrogen Sulfide Odor (C1)	
Oxidized Rhizospheres on Living Roots	
Presence of Reduced Iron (C4)	
Recent Iron Reduction in Tilled Soil (C6)	
Thin Muck Surface (C7)	
Guage or Well Data (D9)	
Other	

<b>Field Observations:</b> Surface Water Present? Yes No x	Depth (inches)	
Water Table Present? Yes No x	Depth (inches)	
Saturation Present? Yes No x	Depth (inches)	

**Hydrology Indicators Present?**  
 Yes No x

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	27 March 2024	Data Point:	12	
Client:	AEP	State:	OH	Section, Township, Range:	Sec S19, T 16N, R 18W			
Investigator(s):	N. Houk, N. Barnett			Landform	Terraces	Local Relief	Convex	
Slope (%):	1-3	Lat.	39.845994	Long.	-82.587370	Datum	NAD83	
Soil Map Unit Name:	Canal silt loam, 0 to 2 percent slopes							
	Climatic/hydrologic conditions typical for time of year?		Y/N	Y				
	Vegetation	N	Soil	N	or Hydrology			N significantly disturbed
	Vegetation	N	Soil	N	or Hydrology			N naturally problematic
Are Normal Circumstances Present?	Yes	x	No					

Hydrophytic Vegetation Present? Yes _____ No <u>  x  </u> Hydric Soil Present? Yes _____ No <u>  x  </u> Wetland Hydrology Present? Yes _____ No <u>  x  </u>				<b>Is the DP within a Wetland?</b> Yes                      No <b>x</b>
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.	<i>Pyrus calleryana</i>		40	Y	UPL 5
2.	<i>Sambucus canadensis</i>		15	Y	FACU 4
3.	<i>Lonicera maackii</i>		10	N	UPL 5
4.					
5.					
			65	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Allium vineale</i>		30	Y	FACU 4
2.	<i>Solidago canadensis</i>		20	Y	FACU 4
3.	<i>Poa pratensis</i>		10	N	FAC 3
4.					
5.					
6.					
7.					
8.					
			60	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	
Remarks:					

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 0

Total number of dominant species across all strata: 4

Percent of dominant species that are OBL, FACW, or FAC: 0.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x 1	0
FACW species	0	x 2	0
FAC species	10	x 3	30
FACU species	65	x 4	260
UPL species	50	x 5	250
Total	125		540

Prevalence Index: 4.32

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. \_\_\_\_\_

Dominance Test is >50% \_\_\_\_\_

Prevalence Index is ≤3.0\* \_\_\_\_\_

Morphological Adaptations\* \_\_\_\_\_

Problematic Hydrophytic Vegetation\* \_\_\_\_\_

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	x
_____	_____	_____

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No x				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 10  
Client: AEP State: OH Section, Township, Range: Sec S24, T 16N, R 19W  
Investigator(s): N. Houk, N. Barnett Landform Lake Plains Local Relief Convex  
Slope (%): 1-3 Lat. 39.843258 Long. -82.588475 Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Minster silty clay loam, 0 to 1 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes No x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes x No	
Wetland Hydrology Present? Yes No x	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Cornus alba</i>		30	Y	FACW	2
2. <i>Rubus allegheniensis</i>		20	Y	FACU	4
3. <i>Rosa multiflora</i>		10	N	FACU	4
4. <i>Lonicera maackii</i>		5	N	UPL	5
5.					
		65	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Solidago canadensis</i>		40	Y	FACU	4
2. <i>Juncus tenuis</i>		15	N	FAC	3
3. <i>Poa pratensis</i>		15	N	FAC	3
4. <i>Juncus effusus</i>		10	N	OBL	1
5. <i>Symphyotrichum ericoides</i>		5	N	FACU	4
6.					
7.					
8.					
		85	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

Dominance Test Worksheet		
Number of dominant species that are OBL, FACW, or FAC:		1
Total number of dominant species across all strata:		3
Percent of dominant species that are OBL, FACW, or FAC:		33.33
Prevalence Index Worksheet		
Total % cover of:		
OBL species	10 x 1	10
FACW species	30 x 2	60
FAC species	30 x 3	90
FACU species	75 x 4	300
UPL species	5 x 5	25
Total	150	485
Prevalence Index:		3.23
Hydrophytic Vegetation Indicators:		
Rapid Test for Hydrophytic Veg.		
Dominance Test is >50%		
Prevalence Index is ≤3.0*		
Morphological Adaptations*		
Problematic Hydrophytic Vegetation*		
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
Hydrophytic Vegetation Present?		
Yes	No	x

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-6	10YR 4/1	100					Si L	
6-18	10YR 4/1	95	10YR 5/6	5	C	M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
Histosol (A1)	Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils
Stratified Layers (A5)	Stripped Matrix (S6)	
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	
Thick Dark Surface (A12)	x Depleted Matrix (F3)	

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes x No
Depth (Inches): _____	
Remarks:	

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	Surface Soil Cracks (B6)
High Water Table (A2)	Drainage Patterns (B10)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Geomorphic Position (D2)
Iron Deposits (B5)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes No x Depth (inches)	Hydrology Indicators Present? Yes No x
Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 8  
Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W  
Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex  
Slope (%): 1-3 Lat. 39.838578 Long. -82.590298 Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species 0 that are OBL, FACW, or FAC: Total number of dominant 1 species across all strata: Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 0 FACW species 0 x 2 0 FAC species 0 x 3 0 FACU species 0 x 4 0 UPL species 80 x 5 400 Total 80 400 Prevalence Index: 5.00 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No x
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Triticum aestivum</i> residue		80	Y	UPL 5	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
		80	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

Histosol (A1)	Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
Stratified Layers (A5)	Stripped Matrix (S6)	Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)	Other

Restrictive Layer (if observed): Type:	Hydric Soil Present?	Yes	No	x
Depth (Inches):				
Remarks:				

## HYDROLOGY

## Wetland Hydrology Indicators:

<b>Primary Indicators (check all that apply)</b>	<b>Secondary Indicators</b>
Surface Water (A1)	Surface Soil Cracks (B6)
High Water Table (A2)	Drainage Patterns (B10)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Geomorphic Position (D2)
Iron Deposits (B5)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes No x Depth (inches)	Hydrology Indicators Present? Yes No x
Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 6  
Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W  
Investigator(s): L. Vine, E. Holt Landform Terraces Local Relief Convex  
Slope (%): 1-3 Lat. 39.836914° Long. -82.590981° Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes No X
Hydric Soil Present? Yes	No		
Wetland Hydrology Present? Yes	No	X	

## VEGETATION

<b>Tree Stratum</b>	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 1 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 1 FACW species 0 x 2 0 FAC species 0 x 3 0 FACU species 0 x 4 0 UPL species 0 x 5 0 Total 1 1 Prevalence Index: 1.00 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% X Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No X
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
<b>Shrub Stratum</b>	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
<b>Herb Stratum</b>	Plot size: 5'				
1. <i>Carex atherodes</i>		Y	100	OBL 1	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
		0	Total Cover		
<b>Woody Vine Stratum</b>	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

## SOIL

<b>Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)</b>							
Depth (inches)	Color	Matrix	Color	%	Type*	Loc**	Redox Features
							Texture
							Remarks
							Residential, no soil pit taken
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix							
<b>Hydric Soil Indicators:</b>							
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)			_____ Redox Dark Surface (F6)			
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat			_____ Depleted Dark Surface (F7)			
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)			_____ Redox Depressions (F8)			
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils</b>			
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)			_____ Coast Prairie Redox (A16)			
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)			_____ Iron-Manganese Masses (F12)			
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)			_____ Very Shallow Dark Surface (F12)			
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)			_____ Other			
<b>Restrictive Layer (if observed):</b> Type: _____							
Depth (Inches): _____							
<b>Hydric Soil Present?</b> Yes No X							
Remarks: No soil pit taken, residential area							

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>					
<b>Primary Indicators (check all that apply)</b>					
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	<b>Secondary Indicators</b> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ FAC-Neutral Test (D5)			
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)				
_____ Saturation (A3)	_____ True Aquatic Plants (B14)				
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)				
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots				
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)				
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)				
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)				
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)				
_____ Sparsely Vegetated Concave Surface	_____ Other				
<b>Field Observations:</b> Surface Water Present? Yes No Depth (inches)				<b>Hydrology Indicators Present?</b>	
Water Table Present? Yes No Depth (inches)				Yes No X	
Saturation Present? Yes No Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
<b>No hydric indicators</b>					



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 4  
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W  
 Investigator(s): L. Vine, E. Holt Landform Terraces Local Relief Convex  
 Slope (%): 1-3 Lat. 39.833067° Long. -82.591983° Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Juncus effusus</i>		30	Y	OBL	1
2. <i>Solidago canadensis</i>		25	Y	FACU	4
3. <i>Schedonorus arundinaceus</i>		20	Y	FACU	4
4. <i>Dichanthelium clandestinum</i>		10	N	FACW	2
5. <i>Apocynum cannabinum</i>		10	N	FAC	3
6. <i>Cyperus strigosus</i>		5	N	FACW	2
7.					
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

Dominance Test Worksheet	
Number of dominant species that are OBL, FACW, or FAC:	1
Total number of dominant species across all strata:	3
Percent of dominant species that are OBL, FACW, or FAC:	33.33
Prevalence Index Worksheet	
Total % cover of:	
OBL species	30 x 1 = 30
FACW species	15 x 2 = 30
FAC species	10 x 3 = 30
FACU species	45 x 4 = 180
UPL species	0 x 5 = 0
Total	100 = 270
Prevalence Index:	2.70

Hydrophytic Vegetation Indicators:	
Rapid Test for Hydrophytic Veg.	
Dominance Test is >50%	
Prevalence Index is ≤3.0*	x
Morphological Adaptations*	
Problematic Hydrophytic Vegetation*	
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
Hydrophytic Vegetation Present?	
Yes	x No

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-15	7.5YR 4/2	100					M	SiL
15-18	10YR 4/2	95	10YR 4/6	5	C		M	SiCL

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F6)
___ Histic Epipedon (A2)	___ 5cm Mucky Peat or Peat	___ Depleted Dark Surface (F7)
___ Black Histic (A3)	___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Hydrogen Sulfide (A4)	___ Sandy Redox (S5)	___ Indicators for Problematic Hydric Soils
___ Stratified Layers (A5)	___ Stripped Matrix (S6)	___ Coast Prairie Redox (A16)
___ 2 cm Muck (A10)	___ Loamy Mucky Mineral (F1)	___ Iron-Manganese Masses (F12)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Very Shallow Dark Surface (F12)
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Other

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> X <input checked="" type="checkbox"/>
Depth (Inches): _____	

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
___ Surface Water (A1)	___ Water Stained Leaves (B9)			___ Surface Soil Cracks (B6)	
X High Water Table (A2)	___ Aquatic Fauna (B13)			___ Drainage Patterns (B10)	
X Saturation (A3)	___ True Aquatic Plants (B14)			___ Dry-Season Water Table (C2)	
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)			___ Crayfish Burrows (C8)	
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots			___ Saturation Visible on Aerial Imagery (C9)	
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)			___ Stunted or Stressed Plants (D1)	
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soil (C6)			___ Geomorphic Position (D2)	
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)			___ FAC-Neutral Test (D5)	
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)				
___ Sparsely Vegetated Concave Surface	___ Other				
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches)			Hydrology Indicators Present?	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches) 4			Yes	X No
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches) 4				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 4A  
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W  
 Investigator(s): L. Vine, E. Holt Landform Terraces Local Relief Convex  
 Slope (%): 1-3 Lat. 39.832183° Long. -82.592208° Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Canal silt loam, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes No X
Hydric Soil Present? Yes	No	X	
Wetland Hydrology Present? Yes	No	X	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 1 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 = 1 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 100 x 5 = 500 Total 101 = 501 Prevalence Index: 4.96 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No X
1.					
2.					
3.					
4.					
5.		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1.					
2.					
3.					
4.					
5.		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <i>Zea mays residue</i>		100	Y	UPL 5	
2.					
3.					
4.					
5.					
6.					
7.					
8.		100	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1.					
2.					
		0	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					SiL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

Histosol (A1)	Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
Stratified Layers (A5)	Stripped Matrix (S6)	Coast Prairie Redox (A16)
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	Iron-Manganese Masses (F12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (F12)
Thick Dark Surface (A12)	Depleted Matrix (F3)	Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes

No

X

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	Surface Soil Cracks (B6)
High Water Table (A2)	Drainage Patterns (B10)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Geomorphic Position (D2)
Iron Deposits (B5)	FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface	

Field Observations: Surface Water Present? Yes No

Depth (inches)

Water Table Present? Yes No

Depth (inches)

Saturation Present? Yes No

Depth (inches)

Hydrology Indicators Present?

Yes

No

X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 3  
 Client: AEP State: OH Section, Township, Range: Sec S25, T 16N, R 19W  
 Investigator(s): L. Vine, E. Holt Landform Flood Plains Local Relief Convex  
 Slope (%): 1-3 Lat. 39.830922° Long. -82.592558° Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Aetna silt loam, occasionally flooded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes x No	Is the DP within a Wetland?
Hydric Soil Present? Yes No x	Yes No X
Wetland Hydrology Present? Yes x No	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Verbesina alternifolia</i>		25	Y	FACW	
2. <i>Solidago canadensis</i>		20	Y	FACW	2
3. <i>Urtica dioica</i>		20	Y	FACW	2
4. <i>Thalictrum dasycarpum</i>		10	N	FACW	2
5. <i>Conium maculatum</i>		10	N	FACW	2
6. <i>Schedonorus arundinaceus</i>		10	N	FACU	4
7. <i>Allium canadense</i>		5	N	FACU	4
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

Dominance Test Worksheet	
Number of dominant species that are OBL, FACW, or FAC:	5
Total number of dominant species across all strata:	7
Percent of dominant species that are OBL, FACW, or FAC:	71.43
Prevalence Index Worksheet	
Total % cover of:	
OBL species	1 x 1 = 1
FACW species	85 x 2 = 170
FAC species	0 x 3 = 0
FACU species	15 x 4 = 60
UPL species	0 x 5 = 0
Total	101 = 231
Prevalence Index:	2.29

Hydrophytic Vegetation Indicators:	
Rapid Test for Hydrophytic Veg.	
Dominance Test is >50%	
Prevalence Index is ≤3.0*	
Morphological Adaptations*	
Problematic Hydrophytic Vegetation*	
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
Hydrophytic Vegetation Present?	
Yes X No	

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					SIL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
Histosol (A1)	Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)
Histic Epipedon (A2)	5cm Mucky Peat or Peat	Depleted Dark Surface (F7)
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Indicators for Problematic Hydric Soils
Stratified Layers (A5)	Stripped Matrix (S6)	
2 cm Muck (A10)	Loamy Mucky Mineral (F1)	
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	
Thick Dark Surface (A12)	Depleted Matrix (F3)	

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes No X
Depth (Inches): _____	
Remarks:	

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
Surface Water (A1)	Surface Soil Cracks (B6)
High Water Table (A2)	Drainage Patterns (B10)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	x Geomorphic Position (D2)
Iron Deposits (B5)	x FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface	
Field Observations: Surface Water Present? Yes No x Depth (inches)	Hydrology Indicators Present? Yes x No
Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	2	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S25, T 16N, R 19W		
Investigator(s):	L. Vine, E.Holt		Landform			Terrances		Local Relief		Convex	
Slope (%):	1-3		Lat.	39.829667°		Long.	-82.592922°		Datum	NAD83	
Soil Map Unit Name:			Canal silt loam, 0 to 2 percent slopes								
Climatic/hydrologic conditions typical for time of year?			Y/N		Y						
Vegetation			N		or Hydrology		N				
Vegetation			N		or Hydrology		N				
Are Normal Circumstances Present?			Yes		x		No				

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	No	X	
Wetland Hydrology Present? Yes	No	X	

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1.					Number of dominant species that are OBL, FACW, or FAC:	1	
2.					Total number of dominant species across all strata:	6	
3.					Percent of dominant species that are OBL, FACW, or FAC:	16.67	
4.					<b>Prevalence Index Worksheet</b>		
5.					Total % cover of:		
		0	Total Cover		OBL species	1 x 1 = 1	
					FACW species	10 x 2 = 20	
					FAC species	0 x 3 = 0	
					FACU species	10 x 4 = 40	
					UPL species	55 x 5 = 275	
					Total	76 = 336	
					Prevalence Index:	4.42	
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				<b>Hydrophytic Vegetation Indicators:</b>		
1.					Rapid Test for Hydrophytic Veg.		
2.					Dominance Test is >50%		
3.					Prevalence Index is <3.0*		
4.					Morphological Adaptations*		
5.					Problematic Hydrophytic Vegetation*		
6.					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
7.					<b>Hydrophytic Vegetation Present?</b>		
8.					Yes	No X	
		0	Total Cover				
<b>Herb Stratum</b>	<b>Plot size: 5'</b>						
1. <i>Zea mays</i>		30	Y	UPL 5			
2. <i>Brassica rapa</i>		15	Y	UPL 5			
3. <i>Lamium purpureum</i>		10	Y	UPL 5			
4. <i>Packera glabella</i>		10	Y	FACW 2			
5. <i>Allium canadense</i>		5	N	FACU 4			
6. <i>Stellaria media</i>		5	N	FACU 4			
7.							
8.							
		75	Total Cover				
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>						
1.							
2.							
		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Matrix			Redox Features					
Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					SiL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>		
	<b>Yes</b>	<b>No</b>	<b>X</b>

Remarks:	No soil pit taken, residential area
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Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	
<b>Field Observations:</b>	Surface Water Present?	Yes	No	Depth (inches)
	Water Table Present?	Yes	No	Depth (inches)
	Saturation Present?	Yes	No	Depth (inches)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
<b>No hydric indicators</b>				



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	27 March 2024	Data Point:	71	
Client:	AEP	State:	OH	Section, Township, Range:	Sec S36, T 16N, R 19W			
Investigator(s):	L. Vine, E.Holt			Landform	Moraines	Local Relief	Convex	
Slope (%):	1-3	Lat.	39.826230°	Long.	-82.593620°	Datum	NAD83	
Soil Map Unit Name:	Bennington silt loam, 0 to 2 percent slopes							
	Climatic/hydrologic conditions typical for time of year?		Y/N	Y				
	Vegetation	N	Soil	N	or Hydrology			N significantly disturbed
	Vegetation	N	Soil	N	or Hydrology			N naturally problematic
Are Normal Circumstances Present?	Yes	x	No					

Hydrophytic Vegetation Present? Yes	_____	No	<u>X</u>	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	_____	No	<u>X</u>	
Wetland Hydrology Present? Yes	X	No		

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.	<i>Cornus alba</i>		30	Y	FACW 2
2.	<i>Rubus allegheniensis</i>		15	Y	FACU 4
3.	<i>Lonicera morrowii</i>		10	N	FACU 4
4.	<i>Prunus serotina</i>		5	N	FACU 4
5.					
			60	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Solidago altissima</i>		25	Y	FACU 4
2.	<i>Epilobium coloratum</i>		20	Y	OBL 1
3.	<i>Brassica rapa</i>		10	N	UPL 5
4.	<i>Symphytotrichum lateriflorum</i>		10	N	FACW 2
5.	<i>Xanthium strumarium</i>		5	N	FAC 3
6.					
7.					
8.					
			70	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 4

Total number of dominant species across all strata: 9

Percent of dominant species that are OBL, FACW, or FAC: 44.44

**Prevalence Index Worksheet**

Total % cover of:

OBL species	1	x 1	1
FACW species	40	x 2	80
FAC species	5	x 3	15
FACU species	55	x 4	220
UPL species	10	x 5	50
Total	111		366

Prevalence Index: 3.30

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. Dominance Test is >50%

Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	X
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Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-12	10YR 4/2	100					SiCL	
12-18	10YR 4/1	100					SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

Restrictive Layer (if observed):	Type: _____	Hydric Soil Present?	Yes	No	X
	Depth (Inches): _____				
Remarks: _____					

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
X	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
X	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	X	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?		Yes	No	X	Depth (inches)				
Water Table Present?		Yes	X	No	Depth (inches) 2				
Saturation Present?		Yes	X	No	Depth (inches) 2				
<b>Hydrology Indicators Present?</b>									
<b>Yes X No</b>									
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
<b>No hydric indicators</b>									



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	70		
Client:	AEP		State:	OH		Section, Township, Range:			Sec S36, T 16N, R 19W			
Investigator(s):	L. Vine, E.Holt		Landform			Moraines	Local Relief	Convex				
Slope (%):	1-3		Lat.	39.824939°		Long.	-82.594821°		Datum	NAD83		
Soil Map Unit Name:			Centerburg silt loam, 2 to 6 percent slopes									
Climatic/hydrologic conditions typical for time of year?			Y/N	Y								
Vegetation			N	or Hydrology		N	significantly disturbed					
Vegetation			N	or Hydrology		N	naturally problematic					
Are Normal Circumstances Present?			Yes	x		No						

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	No	X	

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1. _____					Number of dominant species that are OBL, FACW <sub>i</sub> or FAC:	2	
2. _____					Total number of dominant species across all strata:	4	
3. _____					Percent of dominant species that are OBL, FACW, or FAC:	50.00	
4. _____					<b>Prevalence Index Worksheet</b>		
5. _____		0	Total Cover		Total % cover of:		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				OBL species	1 x 1 = 1	
1. _____					FACW species	0 x 2 = 0	
2. _____					FAC species	55 x 3 = 165	
3. _____					FACU species	35 x 4 = 140	
4. _____					UPL species	10 x 5 = 50	
5. _____		0	Total Cover		Total	101 = 356	
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				Prevalence Index:	3.52	
1. <i>Setaria faberi</i>		35	Y	FACU 4	<b>Hydrophytic Vegetation Indicators:</b>		
2. <i>Setaria pumila</i>		35	Y	FAC 3	Rapid Test for Hydrophytic Veg.		
3. <i>Poa pratensis</i>		20	Y	FAC 3	Dominance Test is >50%		
4. <i>Zea mays</i>		10	N	UPL 5	Prevalence Index is ≤3.0*		
5. _____					Morphological Adaptations*		
6. _____					Problematic Hydrophytic Vegetation*		
7. _____					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
8. _____		100	Total Cover		<b>Hydrophytic Vegetation Present?</b>		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				Yes	No	
1. _____					X		
2. _____		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Matrix			Redox Features					
Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-10	10YR 4/2	100					SiCL	
10-18	10YR 5/1	90	10YR 5/6	10	C	M	SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> X	Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/>	Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/>	Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/>	Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/>	Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____ Remarks: _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>X</b>	<b>No</b>
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Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      X				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
<b>No hydric indicators</b>									



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	27 March 2024	Data Point:	68	
Client:	AEP	State:	OH	Section, Township, Range:	S36, T 16N, R 19W			
Investigator(s):	L. Vine, E.Holt		Landform	Moraines	Local Relief	Convex		
Slope (%):	1-3	Lat.	39.821591°	Long.	-82.598206°	Datum	NAD83	
Soil Map Unit Name:	Bennington silt loam, 0 to 2 percent slopes							
	Climatic/hydrologic conditions typical for time of year?		Y/N	Y				
	Vegetation	N	Soil	N	or Hydrology			N significantly disturbed
	Vegetation	N	Soil	N	or Hydrology			N naturally problematic
Are Normal Circumstances Present?	Yes	x	No					

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	No	X	
Wetland Hydrology Present? Yes	No	X	

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.				
2.				
3.				
4.				
5.				
		0	Total Cover	
Shrub Stratum	Plot size: 15'			
1.	<i>Rubus allegheniensis</i>	30	Y	FACU 4
2.	<i>Elaeagnus umbellata</i>	10	Y	UPL 5
3.				
4.				
5.				
		40	Total Cover	
Herb Stratum	Plot size: 5'			
1.	<i>Poa pratensis</i>	60	Y	FAC 3
2.	<i>Taraxacum officinale</i>	20	Y	FACU 4
3.	<i>Wisteria frutescens</i>	10	N	FACW 2
4.	<i>Solidago canadensis</i>	5	N	FACU 4
5.	<i>Viola renifolia</i>	3	N	FACW 2
6.		2	N	
7.				
8.				
		100	Total Cover	
Woody Vine Stratum	Plot size: 30'			
1.				
2.				
		0	Total Cover	
Remarks:				

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 3

Total number of dominant species across all strata: 7

Percent of dominant species that are OBL, FACW, or FAC: 42.86

**Prevalence Index Worksheet**

Total % cover of:

OBL species	1	x 1	1
FACW species	13	x 2	26
FAC species	60	x 3	180
FACU species	55	x 4	220
UPL species	10	x 5	50
Total	139		477

Prevalence Index: 3.43

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. Dominance Test is >50%  
Prevalence Index is ≤3.0\*  
Morphological Adaptations\*  
Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	X
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Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-15	10YR 4/2	100					SiL	
15-18	10YR 4/4	100					SiL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

Restrictive Layer (if observed):	Type: _____	Hydric Soil Present?	Yes	No	X
	Depth (Inches): _____				
Remarks: _____					

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No X				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
<b>No hydric indicators</b>									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 63  
 Client: AEP State: OH Section, Township, Range: Sec S36, T 16N, R 19W  
 Investigator(s): L. Vine, E. Holt Landform Moraines Local Relief Convex  
 Slope (%): 1-3 Lat. 39.813840° Long. -82.606066° Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Centerville silt loam, 2 to 6 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland?
Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes No <input checked="" type="checkbox"/>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 1 Total number of dominant species across all strata: 1 Percent of dominant species that are OBL, FACW, or FAC: 100.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 = 1 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Total 101 = 401 Prevalence Index: 3.97 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. x Dominance Test is >50% x Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Shrub Stratum</b>	Plot size: 15'				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Herb Stratum</b>	Plot size: 5'				
1. <i>Schedonorus arundinaceus</i>		100	Y	FACU 4	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____		100	Total Cover		
<b>Woody Vine Stratum</b>	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		
Remarks:					

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
									No soil pit, residential
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
<input type="checkbox"/> Histosol (A1)					<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)			
<input type="checkbox"/> Histic Epipedon (A2)					<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)			
<input type="checkbox"/> Black Histic (A3)					<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)			
<input type="checkbox"/> Hydrogen Sulfide (A4)					<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>			
<input type="checkbox"/> Stratified Layers (A5)					<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)			
<input type="checkbox"/> 2 cm Muck (A10)					<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)					<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)			
<input type="checkbox"/> Thick Dark Surface (A12)					<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other			
<b>Restrictive Layer (if observed):</b> Type: _____									
Depth (Inches): _____									
<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>									
Remarks: No soil pit was taken; this is a residential area									

## HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other			
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) _____			<b>Hydrology Indicators Present?</b>	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) _____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches) _____				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
<b>No hydric indicators</b>				



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 62 A  
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, 19W  
 Investigator(s): L. Vine, E. Holt Landform: Moraines Local Relief: Convex  
 Slope (%): 1-3 Lat. 39.812051 Long. -82.608505 Datum: NAD83 NWI Class: N/A  
 Soil Map Unit Name: Centerville silt loam, 2 to 6 percent slopes, eroded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland?
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes No <input checked="" type="checkbox"/>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. <i>Acer rubrum</i>		30	Y	FAC	3
2.					
3.					
4.					
5.		30	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Lonicera maackii</i>		15	Y	UPL	5
2.					
3.					
4.					
5.		15	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Typha angustifolia</i>		50	Y	OBL	1
2. <i>Barbarea vulgaris</i>		20	Y	FAC	3
3. <i>Poa pratensis</i>		20	Y	FAC	3
4. <i>Prunus serotina</i>		10	N	FACU	4
5.					
6.					
7.					
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

Dominance Test Worksheet			
Number of dominant species that are OBL, FACW, or FAC:		4	
Total number of dominant species across all strata:		6	
Percent of dominant species that are OBL, FACW, or FAC:		66.67	
Prevalence Index Worksheet			
Total % cover of:			
OBL species	1 x 1	1	
FACW species	0 x 2	0	
FAC species	70 x 3	210	
FACU species	10 x 4	40	
UPL species	15 x 5	75	
Total	96	326	
Prevalence Index:		3.40	
Hydrophytic Vegetation Indicators:			
Rapid Test for Hydrophytic Veg.			
x Dominance Test is >50%			
Prevalence Index is ≤3.0*			
Morphological Adaptations*			
Problematic Hydrophytic Vegetation*			
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
Hydrophytic Vegetation Present?			
Yes	X	No	

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-15	10YR 4/2	100					SiL	
15-18	10YR 4/4	85	10YR 4/6	15	C	M	SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			
___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F6)	
___ Histic Epipedon (A2)	___ 5cm Mucky Peat or Peat	___ Depleted Dark Surface (F7)	
___ Black Histic (A3)	___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)	
___ Hydrogen Sulfide (A4)	___ Sandy Redox (S5)	Indicators for Problematic Hydric Soils	
___ Stratified Layers (A5)	___ Stripped Matrix (S6)	___ Coast Prairie Redox (A16)	
___ 2 cm Muck (A10)	___ Loamy Mucky Mineral (F1)	___ Iron-Manganese Masses (F12)	
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Very Shallow Dark Surface (F12)	
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Other	
Restrictive Layer (if observed): Type:			
Depth (Inches):		Hydric Soil Present?	Yes No X
Remarks:			

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)		___ Drainage Patterns (B10)	
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Dry-Season Water Table (C2)		___ Crayfish Burrows (C8)	
X Saturation (A3)	___ True Aquatic Plants (B14)	___ Saturation Visible on Aerial Imagery (C9)		___ Stunted or Stressed Plants (D1)	
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Geomorphic Position (D2)		___ FAC-Neutral Test (D5)	
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots				
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)				
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soil (C6)				
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)				
___ Inundation Visible on Aerial Imagery (B7)	___ Gauge or Well Data (D9)				
___ Sparsely Vegetated Concave Surface	___ Other				
Field Observations:				Hydrology Indicators Present?	
Surface Water Present?	Yes No X	Depth (inches)		Yes X No	
Water Table Present?	Yes No X	Depth (inches)			
Saturation Present?	Yes X No	15 Depth (inches)			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 62  
 Client: AEP State: OH Section, Township, Range: Sec S1, T 15N, 19W  
 Investigator(s): L. Vine, E. Holt Landform: Moraines Local Relief: Convex  
 Slope (%): 1-3 Lat. 39.811394° Long. -82.608382° Datum: NAD83 NWI Class: N/A  
 Soil Map Unit Name: Centerville silt loam, 2 to 6 percent slopes, eroded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland?
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes No <input checked="" type="checkbox"/>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Cornus racemosa</i>		50	Y	FAC	3
2. _____					
3. _____					
4. _____					
5. _____					
		50	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Schedonorus arundinaceus</i>		20	Y	FACU	4
2. <i>Symphotrichum lateriflorum</i>		10	Y	FACW	2
3. <i>Brassica rapa</i>		5	N	UPL	5
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
		35	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		
Remarks:					

Dominance Test Worksheet	
Number of dominant species that are OBL, FACW, or FAC:	2
Total number of dominant species across all strata:	4
Percent of dominant species that are OBL, FACW, or FAC:	50.00
Prevalence Index Worksheet	
Total % cover of:	
OBL species	1 x 1 = 1
FACW species	10 x 2 = 20
FAC species	50 x 3 = 150
FACU species	20 x 4 = 80
UPL species	5 x 5 = 25
Total	86 = 276
Prevalence Index:	3.21

Hydrophytic Vegetation Indicators:	
Rapid Test for Hydrophytic Veg.	
Dominance Test is >50%	
Prevalence Index is ≤3.0*	
Morphological Adaptations*	
Problematic Hydrophytic Vegetation*	
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
Hydrophytic Vegetation Present?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-14	10YR 4/3	100					SiL	
14-18	10YR 4/4	100					SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes No <input checked="" type="checkbox"/>
Depth (Inches): _____	
Remarks:	

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
X Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
_____ Other	
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches) _____	Hydrology Indicators Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 7 Depth (inches) _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 7 Depth (inches) _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydric indicators



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	27 March 2024	Data Point:	59	
Client:	AEP	State:	OH	Section, Township, Range:	Sec S1, T 15N, 19W			
Investigator(s):	L. Vine, E.Holt			Landform	Moraines	Local Relief	Convex	
Slope (%):	1-3	Lat.	39.806567°	Long.	-82.612869°	Datum	NAD83	
Soil Map Unit Name:	Centersburg silt loam, 2 to 6 percent slopes							
	Climatic/hydrologic conditions typical for time of year?		Y/N	Y				
	Vegetation	N	Soil	N	or Hydrology			N significantly disturbed
	Vegetation	N	Soil	N	or Hydrology			N naturally problematic
Are Normal Circumstances Present?	Yes	x	No					

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	No	X	
Wetland Hydrology Present? Yes	No	X	

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.	<i>Rubus allegheniensis</i>		10	Y	FACU 4
2.	<i>Mentha X rotundifolia</i>		10	Y	FAC 3
3.					
4.					
5.					
			20	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Setaria faberi</i>		30	Y	FACU 4
2.	<i>Allium canadense</i>		20	Y	FACU 4
3.	<i>Apocynum cannabinum</i>		20	Y	FAC 3
4.					
5.					
6.					
7.					
8.					
			70	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	
Remarks:					

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 2

Total number of dominant species across all strata: 5

Percent of dominant species that are OBL, FACW, or FAC: 40.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	1	x	1	1
FACW species	0	x	2	0
FAC species	30	x	3	90
FACU species	60	x	4	240
UPL species	0	x	5	0
Total	91			331

Prevalence Index: 3.64

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. ☐

Dominance Test is >50% ☐

Prevalence Index is ≤3.0\* ☐

Morphological Adaptations\* ☐

Problematic Hydrophytic Vegetation\* ☐

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	X
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Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3							SiL

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>X</b>
	Remarks: _____			

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other		
<b>Field Observations:</b>	Surface Water Present?	Yes	No	Depth (inches)
	Water Table Present?	Yes	No	Depth (inches)
	Saturation Present?	Yes	No	Depth (inches)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
<b>No hydric indicators</b>				



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	57	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S2, T 15N, R 19W		
Investigator(s):	N. Houk, N. Barnett		Landform			Moraines	Local Relief		Convex		
Slope (%):	1-3		Lat.	39.803787		Long.	-82.615001		Datum	NAD83	
Soil Map Unit Name:			Bennington silt loam, 0 to 2 percent slopes								
Climatic/hydrologic conditions typical for time of year?			Y/N		Y						
Vegetation			N		or Hydrology		N				
Vegetation			N		or Hydrology		N				
Are Normal Circumstances Present?			Yes		x		No				

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1. _____					Number of dominant species that are OBL, FACW <sub>1</sub> or FAC:	1	
2. _____					Total number of dominant species across all strata:	2	
3. _____					Percent of dominant species that are OBL, FACW <sub>1</sub> or FAC:	50.00	
4. _____					<b>Prevalence Index Worksheet</b>		
5. _____		0	Total Cover		Total % cover of:		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				OBL species	0 x 1 = 0	
1. _____					FACW species	50 x 2 = 100	
2. _____					FAC species	0 x 3 = 0	
3. _____					FACU species	20 x 4 = 80	
4. _____					UPL species	30 x 5 = 150	
5. _____		0	Total Cover		Total	100 = 330	
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				Prevalence Index:	3.30	
1. <i>Elymus virginicus</i>		50	Y	FACW	2	<b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation*  *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Hydrophytic Vegetation Present?</b> Yes No x	
2. <i>Brassica napus</i>		20	Y	UPL	5		
3. <i>Setaria faberi</i>		15	N	FACU	4		
4. <i>Lamium purpureum</i>		10	N	UPL	5		
5. <i>Taraxacum officinale</i>		5	N	FACU	4		
6. _____							
7. _____							
8. _____							
		100	Total Cover				
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>						
1. _____							
2. _____							
		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-4	10YR 3/4	100					Si C L	
4-18	10YR 4/3	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>		
	<b>Yes</b>	<b>No</b>	<b>x</b>
Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      x				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport			City/County:	Fairfield County		Date:	27 March 2024		Data Point:	52			
Client:	AEP			State:	OH		Section, Township, Range:	Sec S11, T 15N, R 19W						
Investigator(s):	N. Houk, N. Barnett					Landform	Moraines		Local Relief		Convex			
Slope (%):	1-3		Lat.	39.796059		Long.	-82.620611		Datum	NAD83		NWI Class:	N/A	
Soil Map Unit Name:	Centersburg silt loam, 2 to 6 percent slopes, eroded													
Climatic/hydrologic conditions typical for time of year?				Y/N		Y								
Vegetation				N		or Hydrology		N significantly disturbed						
Vegetation				N		or Hydrology		N naturally problematic						
Are Normal Circumstances Present?				Yes		x		No						

Hydrophytic Vegetation Present? Yes	_____	No	<u>x</u>	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	_____	No	<u>x</u>	
Wetland Hydrology Present? Yes	_____	No	<u>x</u>	
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1.						Number of dominant species that are OBL, FACW, or FAC: 1		
2.						Total number of dominant species across all strata: 3		
3.						Percent of dominant species that are OBL, FACW, or FAC: 33.33		
4.						Prevalence Index Worksheet		
5.			0	Total Cover		Total % cover of:		
						OBL species	0 x 1	0
						FACW species	50 x 2	100
						FAC species	0 x 3	0
						FACU species	65 x 4	260
						UPL species	5 x 5	25
						Total	120	385
						Prevalence Index: 3.21		
						Hydrophytic Vegetation Indicators:		
						Rapid Test for Hydrophytic Veg.		
						Dominance Test is >50%		
						Prevalence Index is ≤3.0*		
						Morphological Adaptations*		
						Problematic Hydrophytic Vegetation*		
						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
						Hydrophytic Vegetation Present?		
						Yes	No	x
Shrub Stratum		Plot size: 15'						
1.	<i>Rubus allegheniensis</i>		20	Y	FACU	4		
2.								
3.								
4.								
5.			20	Total Cover				
Herb Stratum		Plot size: 5'						
1.	<i>Carex vulpinoidea</i>		40	Y	FACW	2		
2.	<i>Schedonorus arundinaceus</i>		35	Y	FACU	4		
3.	<i>Cyperus esculentus</i>		10	N	FACW	2		
4.	<i>Symphytotrichum ericoides</i>		10	N	FACU	4		
5.	<i>Daucus carota</i>		5	N	UPL	5		
6.								
7.								
8.								
						100	Total Cover	
Woody Vine Stratum		Plot size: 30'						
1.								
2.								
						0	Total Cover	
Remarks:								

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-14	10YR 4/1	100					Si C L	
14-18	10YR 4/1	95	10YR 5/6	5	C	M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

<b>Wetland Hydrology Indicators:</b>						
<b>Primary Indicators (check all that apply)</b>				<b>Secondary Indicators</b>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Field Observations:</b>	<b>Surface Water Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>	<b>Depth (inches)</b>	
	<b>Water Table Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>	<b>Depth (inches)</b>	
	<b>Saturation Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>	<b>Depth (inches)</b>	
						<b>Hydrology Indicators Present?</b>
						<b>Yes      No      x</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: \_\_\_\_\_ Date: 27 March 2024 Data Point: 51  
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform: \_\_\_\_\_  
 Slope (%): 1-3 Lat. 39.794865 Long. -82.621345 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Amanda silt loam, 2 to 6 percent slopes, eroded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	
Hydric Soil Present? Yes	x	No	
Wetland Hydrology Present? Yes	No	x	
Is the DP within a Wetland?			Yes No x

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 4 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 95 x 4 = 380 UPL species 10 x 5 = 50 Total 105 = 430 Prevalence Index: 4.10 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No x
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		<b>Shrub Stratum</b> Plot size: 15' 1. <i>Rubus occidentalis</i> 10 Y UPL 5 2. _____ 3. _____ 4. _____ 5. _____ 10 Total Cover
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		10	Total Cover		<b>Herb Stratum</b> Plot size: 5' 1. <i>Bromus inermis</i> 30 Y FACU 4 2. <i>Setaria faberi</i> 30 Y FACU 4 3. <i>Solidago canadensis</i> 30 Y FACU 4 4. <i>Allium vineale</i> 5 N FACU 4 5. _____ 6. _____ 7. _____ 8. _____ 95 Total Cover
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					<b>Woody Vine Stratum</b> Plot size: 30' 1. _____ 2. _____ 0 Total Cover
1. _____					
2. _____					
3. _____					
4. _____					

Remarks:

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
0-18	10YR 4/1	95	10YR 5/6	5	C		M	Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	
_____ Thick Dark Surface (A12)	_____ x Depleted Matrix (F3)	
		Other

Restrictive Layer (if observed): Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present?

Yes x No

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches)	<b>Hydrology Indicators Present?</b> Yes No x
Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: \_\_\_\_\_ Date: 27 March 2024 Data Point: 48  
 Client: AEP State: OH Section, Township, Range: Sec S11, T 15N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform \_\_\_\_\_ Till Plains \_\_\_\_\_ Local Relief \_\_\_\_\_ Convex \_\_\_\_\_  
 Slope (%): 1-3 Lat. 39.789262 Long. -82.623285 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Amanda silty clay loam, 6 to 12 percent slopes, severely eroded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No <u>x</u>
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	
Remarks: _____	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Rhus typhina</i>		2	N	UPL	5
2. _____					
3. _____					
4. _____					
5. _____					
		2	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Solidago canadensis</i>		40	Y	FACU	4
2. <i>Schedonorus arundinaceus</i>		30	Y	FACU	4
3. <i>Setaria faberi</i>		25	Y	FACU	4
4. <i>Daucus carota</i>		5	N	UPL	5
5. _____					
6. _____					
7. _____					
8. _____					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		
Remarks: _____					

Dominance Test Worksheet	
Number of dominant species that are OBL, FACW, or FAC:	0
Total number of dominant species across all strata:	3
Percent of dominant species that are OBL, FACW, or FAC:	0.00
Prevalence Index Worksheet	
Total % cover of:	
OBL species	0 x 1 = 0
FACW species	0 x 2 = 0
FAC species	0 x 3 = 0
FACU species	95 x 4 = 380
UPL species	7 x 5 = 35
Total	102 = 415
Prevalence Index:	4.07

Hydrophytic Vegetation Indicators:	
Rapid Test for Hydrophytic Veg.	
Dominance Test is >50%	
Prevalence Index is ≤3.0*	
Morphological Adaptations*	
Problematic Hydrophytic Vegetation*	
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
Hydrophytic Vegetation Present?	
Yes _____ No <u>x</u>	

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____ Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes _____ No <u>x</u>
Depth (Inches): _____	
Remarks: _____	

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
_____ Water Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soil (C6)	
_____ Thin Muck Surface (C7)	
_____ Gauge or Well Data (D9)	
_____ Other	

Field Observations: Surface Water Present? Yes _____ No <u>x</u>	Depth (inches)	Hydrology Indicators Present? Yes _____ No <u>x</u>
Water Table Present? Yes _____ No <u>x</u>	Depth (inches)	
Saturation Present? Yes _____ No <u>x</u>	Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



Site:	W. Lancaster-S. Baltimore-W. Millersport			City/County:				Date:	27 March 2024		Data Point:	46		
Client:	AEP			State:	OH			Section, Township, Range:	Sec S11, T 15N, R 19W					
Investigator(s):	N. Houk, N. Barnett							Landform	Moraines		Local Relief	Convex		
Slope (%):	1-3		Lat.	39.783994		Long.	-82.624965		Datum	NAD83		NWI Class:	N/A	
Soil Map Unit Name:	Centersburg silt loam, 2 to 6 percent slopes, eroded													
Climatic/hydrologic conditions typical for time of year?				Y/N		Y								
Vegetation		N		Soil		N		or Hydrology		N		significantly disturbed		
Vegetation		N		Soil		N		or Hydrology		N		naturally problematic		
Are Normal Circumstances Present?				Yes		x		No						

Hydrophytic Vegetation Present? Yes _____ No <u>  x  </u> Hydric Soil Present? Yes _____ No <u>  x  </u> Wetland Hydrology Present? Yes _____ No <u>  x  </u>				Is the DP within a Wetland? Yes                      No                      x
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Schedonorus arundinaceus</i>		40	Y	FACU 4
2.	<i>Lamium purpureum</i>		30	Y	UPL 5
3.	<i>Stellaria media</i>		20	N	FACU 4
4.	<i>Taraxacum officinale</i>		10	N	FACU 4
5.	<i>Trifolium repens</i>		10	N	FACU 4
6.					
7.					
8.					
			110	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 0

Total number of dominant species across all strata: 2

Percent of dominant species that are OBL, FACW, or FAC: 0.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x 1	0
FACW species	0	x 2	0
FAC species	0	x 3	0
FACU species	80	x 4	320
UPL species	30	x 5	150
<b>Total</b>	<b>110</b>		<b>470</b>

Prevalence Index: 4.27

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. Dominance Test is >50% ☐

Prevalence Index is ≤3.0\* ☐

Morphological Adaptations\* ☐

Problematic Hydrophytic Vegetation\* ☐

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	X
-----	----	---

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No x				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport			City/County:				Date:	27 March 2024		Data Point:	44		
Client:	AEP			State:	OH			Section, Township, Range:			Sec S14, T 15N, R 19W			
Investigator(s):	N. Houk, N. Barnett							Landform	Morines		Local Relief	Convex		
Slope (%):	1-3		Lat.	39.780789		Long.	-82.625887		Datum	NAD83		NWI Class:	N/A	
Soil Map Unit Name:	Amanda silty clay loam, 6 to 12 percent slopes, severely eroded													
Climatic/hydrologic conditions typical for time of year?				Y/N		Y								
Vegetation				N		or Hydrology		N		significantly disturbed				
Vegetation				N		or Hydrology		N		naturally problematic				
Are Normal Circumstances Present?				Yes		x		No						

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1.	<i>Juglans nigra</i>		10	Y	FACU	4	Number of dominant species that are OBL, FACW <sub>1</sub> or FAC:	1
2.							Total number of dominant species across all strata:	7
3.							Percent of dominant species that are OBL, FACW, or FAC:	14.29
4.							<b>Prevalence Index Worksheet</b>	
5.			10	Total Cover			Total % cover of:	
Shrub Stratum		Plot size: 15'					OBL species	0 x 1 = 0
1.	<i>Juglans nigra</i>		30	Y	FACU	4	FACW species	20 x 2 = 40
2.	<i>Rosa multiflora</i>		25	Y	FACU	4	FAC species	0 x 3 = 0
3.	<i>Rubus caesius</i>		20	Y	FACU	4	FACU species	145 x 4 = 580
4.							UPL species	20 x 5 = 100
5.							Total	185 = 720
Herb Stratum		Plot size: 5'					Prevalence Index: 3.89	
1.	<i>Bromus inermis</i>		50	Y	FACU	4	<b>Hydrophytic Vegetation Indicators:</b>	
2.	<i>Conium maculatum</i>		20	Y	FACW	2	Rapid Test for Hydrophytic Veg.	
3.	<i>Lilium lancifolium</i>		20	Y	UPL	5	Dominance Test is >50%	
4.	<i>Allium vineale</i>		10	N	FACU	4	Prevalence Index is ≤3.0*	
5.							Morphological Adaptations*	
6.							Problematic Hydrophytic Vegetation*	
7.							*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
8.							<b>Hydrophytic Vegetation Present?</b>	
Woody Vine Stratum		Plot size: 30'					Yes	No
1.							x	
2.								
Remarks:			0	Total Cover				

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/3	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____ Remarks: _____	<b>Hydric Soil Present?</b>		
	Yes	No	x

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      x				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 42  
 Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W  
 Investigator(s): L. Vine, E. Holt Landform: Till Plains Local Relief: Convex  
 Slope (%): Lat. 39.776710° Long. -82.627371° Datum: NAD83 NWI Class: N/A  
 Soil Map Unit Name: Amanda silt loam, 2 to 6 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes No X
Hydric Soil Present? Yes	No		
Wetland Hydrology Present? Yes	No	X	

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 1 Total number of dominant species across all strata: 4 Percent of dominant species that are OBL, FACW, or FAC: 25.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 = 1 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Total 101 = 401 Prevalence Index: 3.97 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No X
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____		0	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				
1. <i>Schedonorus arundinaceus</i>		50	Y	FACU 4	
2. <i>Trifolium repens</i>		30	Y	FACU 4	
3. <i>Plantago lanceolata</i>		15	N	FACU 4	
4. <i>Taraxacum officinale</i>		5	N	FACU 4	
5. _____					
6. _____					
7. _____					
8. _____					
		100	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				
1. _____					
2. _____					
		0	Total Cover		
Remarks:					

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)									
Depth (inches)	Color	Matrix %	Color	%	Type*	Loc**	Redox Features	Texture	Remarks
									No soil pit taken, pasture
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix									
<b>Hydric Soil Indicators:</b>									
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)				_____ Redox Dark Surface (F6)				
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat				_____ Depleted Dark Surface (F7)				
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)				_____ Redox Depressions (F8)				
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)				<b>Indicators for Problematic Hydric Soils</b>				
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)				_____ Coast Prairie Redox (A16)				
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)				_____ Iron-Manganese Masses (F12)				
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)				_____ Very Shallow Dark Surface (F12)				
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)				_____ Other				
<b>Restrictive Layer (if observed):</b> Type: _____									
Depth (Inches): _____									
<b>Hydric Soil Present?</b> Yes No									
Remarks: No soil pit taken, pasture land with farm animals present									

## HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)				Secondary Indicators
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____ Surface Soil Cracks (B6)		
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)		
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____ Dry-Season Water Table (C2)		
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)		
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____ Saturation Visible on Aerial Imagery (C9)		
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)		
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	_____ Geomorphic Position (D2)		
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ FAC-Neutral Test (D5)		
_____ Inundation Visible on Aerial Imagery (B7)	_____ Gauge or Well Data (D9)			
_____ Sparsely Vegetated Concave Surface	_____ Other			
<b>Field Observations:</b> Surface Water Present? Yes No Depth (inches)				<b>Hydrology Indicators Present?</b> Yes No X
Water Table Present? Yes No Depth (inches)				
Saturation Present? Yes No Depth (inches)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
<b>No hydric indicators</b>				



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	27 March 2024	Data Point:	41
Client:	AEP	State:	OH	Section, Township, Range:	Sec S14, T 15N, R 19W		
Investigator(s):	L. Vine, E.Holt			Landform	Local Relief		
Slope (%):	5-8	Lat.	39.772667°	Long.	-82.628789°	Datum	NAD83
Soil Map Unit Name:	Amanda silty clay loam, 6 to 12 percent slopes, severely eroded						
	Climatic/hydrologic conditions typical for time of year?		Y/N	Y			
	Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed
	Vegetation	N	Soil	N	or Hydrology	N	naturally problematic
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	X	No	
Wetland Hydrology Present? Yes	No	X	

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.				
2.				
3.				
4.				
5.				
		0	Total Cover	
Shrub Stratum	Plot size: 15'			
1.	<i>Rhamnus cathartica</i>	30	Y	FAC 3
2.	<i>Ailanthus altissima</i>	15	Y	FACU 4
3.	<i>Sambucus nigra</i>	10	N	FAC 3
4.	<i>Elaeagnus angustifolia</i>	10	N	FACU 4
5.				
		65	Total Cover	
Herb Stratum	Plot size: 5'			
1.	<i>Schedonorus arundinaceus</i>	30	Y	FACU 4
2.	<i>Fragaria vesca</i>	20	Y	UPL 5
3.	<i>Verbesina alternifolia</i>	15	N	FACW 2
4.	<i>Carex frankii</i>	10	N	OBL 1
5.	<i>Elymus canadensis</i>	10	N	FACU 4
6.	<i>Verbascum thapsus</i>	10	N	UPL 5
7.	<i>Arctium minus</i>	5	N	FACU 4
8.				
		100	Total Cover	
Woody Vine Stratum	Plot size: 30'			
1.				
2.				
		0	Total Cover	
Remarks:				

**Dominance Test Worksheet**

Number of dominant species 5

that are OBL, FACW, or FAC:

Total number of dominant species across all strata: 11

Percent of dominant species that are OBL, FACW, or FAC: 45.45

**Prevalence Index Worksheet**

Total % cover of:

OBL species	1 x 1	1
FACW species	15 x 2	30
FAC species	40 x 3	120
FACU species	70 x 4	280
UPL species	30 x 5	150
Total	156	581

Prevalence Index: 3.72

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg.

Dominance Test is >50%

Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	X
-----	----	---

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Color	%	Type*	Loc**	Texture	Remarks
0-8	10YR 4/2	95	10YR 5/4	5	C	M	SiL	
8-18	10YR 4/2	100					SiL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input checked="" type="checkbox"/> X	Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/>	Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/>	Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/>	Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/>	Other

<b>Restrictive Layer (if observed):</b> Type: _____		<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>X</b>	<b>No</b>
Depth (Inches): _____					
Remarks: _____					

Wetland Hydrology Indicators:				
Primary Indicators (check all that apply)			Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/> Geomorphic Position (D2)		
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other			
<b>Field Observations:</b>	Surface Water Present?	Yes	No	Depth (inches)
	Water Table Present?	Yes	No	Depth (inches)
	Saturation Present?	Yes	No	Depth (inches)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
<b>No hydric indicators</b>				



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	27 March 2024		Data Point:	40	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S14, T 15N, R 19W		
Investigator(s):	L. Vine, E.Holt		Landform			Moraines	Local Relief		Convex		
Slope (%):	Lat. 39.771423°		Long. -82.629211°		Datum NAD83		NWI Class:		N/A		
Soil Map Unit Name: Amanda silty clay loam, 6 to 12 percent slopes, severely eroded											
Climatic/hydrologic conditions typical for time of year? Y/N Y											
Vegetation N, Soil N or Hydrology N significantly disturbed											
Vegetation N, Soil N or Hydrology N naturally problematic											
Are Normal Circumstances Present? Yes x No											

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes      No      X
Hydric Soil Present? Yes	No	X	
Wetland Hydrology Present? Yes	No	X	

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet			
1.						Number of dominant species that are OBL, FACW <sub>1</sub> or FAC: 3			
2.						Total number of dominant species across all strata: 3			
3.						Percent of dominant species that are OBL, FACW, or FAC: 100.00			
4.						Prevalence Index Worksheet			
5.			0	Total Cover		Total % cover of:			
Shrub Stratum						Plot size: 15'			
1.	<i>Rhamnus cathartica</i>		40	Y	FAC	3	OBL species	1 x 1	1
2.							FACW species	10 x 2	20
3.							FAC species	40 x 3	120
4.							FACU species	80 x 4	320
5.			40	Total Cover			UPL species	0 x 5	0
Herb Stratum						Plot size: 5'			
1.	<i>Schedonorus arundinaceus</i>		80	Y	FACU	4	Total	131	461
2.	<i>Conium maculatum</i>		10	N	FACW	2	Prevalence Index: 3.52		
3.							Hydrophytic Vegetation Indicators:		
4.							Rapid Test for Hydrophytic Veg.		
5.							Dominance Test is >50%		
6.							Prevalence Index is <3.0*		
7.							Morphological Adaptations*		
8.							Problematic Hydrophytic Vegetation*		
Woody Vine Stratum						Plot size: 30'			
1.							*Indicators of hydric soil and wetland hydrology must be present, unless		
2.							disturbed or problematic		
Remarks:						Hydrophytic Vegetation Present?			
						Yes No X			

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-3	10YR 3/3	100						Impenetrable rock layer

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____		<b>Hydric Soil Present?</b>			<b>Yes</b>	<b>No</b>	<b>X</b>
Depth (Inches): _____							
Remarks: _____							

Wetland Hydrology Indicators:					Secondary Indicators		
Primary Indicators (check all that apply)							
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface		<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/> Guage or Well Data (D9)			
		<input type="checkbox"/> Other					
<b>Field Observations:</b>	Surface Water Present?	Yes	No	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      X		
	Water Table Present?	Yes	No	Depth (inches)			
	Saturation Present?	Yes	No	Depth (inches)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
<b>No hydric indicators</b>							



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 27 March 2024 Data Point: 39  
Client: AEP State: OH Section, Township, Range: Sec S14, T 15N, R 19W  
Investigator(s): L. Vine, E. Holt Landform: Till Plains Local Relief: Convex  
Slope (%): Lat. 39.770633° Long. -82.629435° Datum: NAD83 NWI Class: N/A  
Soil Map Unit Name: Amanda-Loudonville complex, 6 to 12 percent slopes, eroded  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	X	Is the DP within a Wetland? Yes No X
Hydric Soil Present? Yes	No		
Wetland Hydrology Present? Yes	No	X	

## VEGETATION

<b>Tree Stratum</b>	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 1 Total number of dominant species across all strata: 3 Percent of dominant species that are OBL, FACW, or FAC: 33.33 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 1 x 1 = 1 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Total 101 = 401 Prevalence Index: 3.97 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No X
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
<b>Shrub Stratum</b>	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
<b>Herb Stratum</b>	Plot size: 5'				
1.	<i>Schedonorus arundinaceus</i>	80	Y	FACU 4	
2.	<i>Allium canadense</i>	10	N	FACU 4	
3.	<i>Trifolium repens</i>	10	N	FACU 4	
4.					
5.					
6.					
7.					
8.					
		100	Total Cover		
<b>Woody Vine Stratum</b>	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					

## SOIL

<b>Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)</b>								
Depth (inches)	Color	Matrix	Color	%	Type*	Loc**	Texture	Remarks
								No soil pit, residential
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators:</b>								
	Histosol (A1)				Sandy Mucky Mineral (S1)			Redox Dark Surface (F6)
	Histic Epipedon (A2)				5cm Mucky Peat or Peat			Depleted Dark Surface (F7)
	Black Histic (A3)				Sandy Gleyed Matrix (S4)			Redox Depressions (F8)
	Hydrogen Sulfide (A4)				Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils</b>
	Stratified Layers (A5)				Stripped Matrix (S6)			Coast Prairie Redox (A16)
	2 cm Muck (A10)				Loamy Mucky Mineral (F1)			Iron-Manganese Masses (F12)
	Depleted Below Dark Surface (A11)				Loamy Gleyed Matrix (F2)			Very Shallow Dark Surface (F12)
	Thick Dark Surface (A12)				Depleted Matrix (F3)			Other
<b>Restrictive Layer (if observed):</b> Type: _____								
Depth (Inches): _____								
<b>Hydric Soil Present?</b> Yes No								
Remarks: No soil pit taken, residential area								

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>				<b>Secondary Indicators</b>		
<b>Primary Indicators (check all that apply)</b>						
	Surface Water (A1)		Water Stained Leaves (B9)		Surface Soil Cracks (B6)	
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)	
	Saturation (A3)		True Aquatic Plants (B14)		Dry-Season Water Table (C2)	
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)	
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots		Saturation Visible on Aerial Imagery (C9)	
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)	
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soil (C6)		Geomorphic Position (D2)	
	Iron Deposits (B5)		Thin Muck Surface (C7)		FAC-Neutral Test (D5)	
	Inundation Visible on Aerial Imagery (B7)		Guage or Well Data (D9)			
	Sparsely Vegetated Concave Surface		Other			
<b>Field Observations:</b> Surface Water Present? Yes No Depth (inches)				<b>Hydrology Indicators Present?</b>		
Water Table Present? Yes No Depth (inches)				Yes No X		
Saturation Present? Yes No Depth (inches)						
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:						
<b>No hydric indicators</b>						



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:		Date:	28 March 2024	Data Point:	36
Client:	AEP	State:	OH	Section, Township, Range:	Sec S23, T 15N, R 19W		
Investigator(s):	N. Houk, N. Barnett			Landform	Till Plains	Local Relief	Convex
Slope (%):	1-3	Lat.	39.764870	Long.	-82.631439	Datum	NAD83
						NWI Class:	N/A
Soil Map Unit Name:	Amanda silt loam, 6 to 12 percent slopes, eroded						
Climatic/hydrologic conditions typical for time of year?	Y/N	Y					
Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed	
Vegetation	N	Soil	N	or Hydrology	N	naturally problematic	
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes _____ No <u>  x  </u> Hydric Soil Present? Yes _____ No <u>  x  </u> Wetland Hydrology Present? Yes _____ No <u>  x  </u>				<b>Is the DP within a Wetland?</b> Yes                  No                  x
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Dactylis glomerata</i>		80	Y	FACU 4
2.	<i>Achillea millefolium</i>		10	N	FACU 4
3.	<i>Trifolium repens</i>		10	N	FACU 4
4.					
5.					
6.					
7.					
8.					
			100	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	
Remarks:					

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 0

Total number of dominant species across all strata: 1

Percent of dominant species that are OBL, FACW, or FAC: 0.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x 1	0
FACW species	0	x 2	0
FAC species	0	x 3	0
FACU species	100	x 4	400
UPL species	0	x 5	0
Total	100		400

Prevalence Index: 4.00

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. \_\_\_\_\_

Dominance Test is >50% \_\_\_\_\_

Prevalence Index is ≤3.0\* \_\_\_\_\_

Morphological Adaptations\* \_\_\_\_\_

Problematic Hydrophytic Vegetation\* \_\_\_\_\_

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	x

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Field Observations:</b>					<b>Hydrology Indicators Present?</b>				
Surface Water Present?	Yes	No	x	Depth (inches)					
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					<b>Yes</b> <b>No</b> <b>x</b>				



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: \_\_\_\_\_ Date: 28 March 2024 Data Point: 34  
Client: AEP State: OH Section, Township, Range: Sec S23, T 15N, R 19W  
Investigator(s): N. Houk, N. Barnett Landform: \_\_\_\_\_  
Slope (%): 1-3 Lat. 39.759099 Long. -82.633227 Datum NAD83 NWI Class: N/A  
Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes, eroded  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes _____ No x	
Wetland Hydrology Present? Yes _____ No x	
Remarks: _____	

## VEGETATION

<b>Tree Stratum</b>	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 2 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 0 FACW species 0 x 2 0 FAC species 0 x 3 0 FACU species 40 x 4 160 UPL species 55 x 5 275 Total 95 435 Prevalence Index: 4.58 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No x
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
<b>Shrub Stratum</b>	Plot size: 15'				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
<b>Herb Stratum</b>	Plot size: 5'				
1. <i>Glycine max residue</i>		50	Y	UPL 5	
2. <i>Stellaria media</i>		40	Y	FACU 4	
3. <i>Lamium purpureum</i>		5	N	UPL 5	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
		95	Total Cover		
<b>Woody Vine Stratum</b>	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		
Remarks: _____					

## SOIL

<b>Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)</b>									
Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks	
0-18	10YR 4/3	100					Si L		
<b>Hydric Soil Indicators:</b> Histosol (A1) _____ Sandy Mucky Mineral (S1) _____ Redox Dark Surface (F6) _____ Histic Epipedon (A2) _____ 5cm Mucky Peat or Peat _____ Depleted Dark Surface (F7) _____ Black Histic (A3) _____ Sandy Gleyed Matrix (S4) _____ Redox Depressions (F8) _____ Hydrogen Sulfide (A4) _____ Sandy Redox (S5) _____ <b>Indicators for Problematic Hydric Soils</b> _____ Stratified Layers (A5) _____ Stripped Matrix (S6) _____ Coast Prairie Redox (A16) _____ 2 cm Muck (A10) _____ Loamy Mucky Mineral (F1) _____ Iron-Manganese Masses (F12) _____ Depleted Below Dark Surface (A11) _____ Loamy Gleyed Matrix (F2) _____ Very Shallow Dark Surface (F12) _____ Thick Dark Surface (A12) _____ Depleted Matrix (F3) _____ Other _____									
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____									
<b>Hydric Soil Present?</b> Yes No x									
Remarks: _____									

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>				
<b>Primary Indicators (check all that apply)</b>				
Surface Water (A1) _____	Water Stained Leaves (B9) _____	<b>Secondary Indicators</b> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ FAC-Neutral Test (D5) _____		
High Water Table (A2) _____	Aquatic Fauna (B13) _____			
Saturation (A3) _____	True Aquatic Plants (B14) _____			
Water Marks (B1) _____	Hydrogen Sulfide Odor (C1) _____			
Sediment Deposits (B2) _____	Oxidized Rhizospheres on Living Roots _____			
Drift Deposits (B3) _____	Presence of Reduced Iron (C4) _____			
Algal Mat or Crust (B4) _____	Recent Iron Reduction in Tilled Soil (C6) _____			
Iron Deposits (B5) _____	Thin Muck Surface (C7) _____			
Inundation Visible on Aerial Imagery (B7) _____	Guage or Well Data (D9) _____			
Sparsely Vegetated Concave Surface _____	Other _____			
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) _____		<b>Hydrology Indicators Present?</b> Yes No x		
Water Table Present? Yes No x Depth (inches) _____				
Saturation Present? Yes No x Depth (inches) _____				
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available: _____				



Site:	W. Lancaster-S. Baltimore-W. Millersport			City/County:				Date:	28 March 2024		Data Point:	32	
Client:	AEP			State:	OH			Section, Township, Range:			Sec S26, T 15N, R 19W		
Investigator(s):	N. Houk, N. Barnett							Landform	Till Plains		Local Relief	Concave	
Slope (%):	1-3			Lat.	39.754944			Long.	-82.634647		Datum	NAD83	
Soil Map Unit Name:	Marengo clay loam												
Climatic/hydrologic conditions typical for time of year?				Y/N		Y							
Vegetation				N		or Hydrology		N		significantly disturbed			
Vegetation				N		or Hydrology		N		naturally problematic			
Are Normal Circumstances Present?				Yes		x		No					

Hydrophytic Vegetation Present? Yes	x	No		Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	x	No		
Wetland Hydrology Present? Yes		No	x	
Remarks:	Stormwater basin overflow area			

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1. _____					Number of dominant species that are OBL, FACW <sub>1</sub> or FAC:	1	
2. _____					Total number of dominant species across all strata:	1	
3. _____					Percent of dominant species that are OBL, FACW, or FAC:	100.00	
4. _____					<b>Prevalence Index Worksheet</b>		
5. _____		0	Total Cover		Total % cover of:		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				OBL species	0 x 1 = 0	
1. _____					FACW species	100 x 2 = 200	
2. _____					FAC species	0 x 3 = 0	
3. _____					FACU species	0 x 4 = 0	
4. _____					UPL species	0 x 5 = 0	
5. _____		0	Total Cover		Total	100 = 200	
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				Prevalence Index:	2.00	
1. <i>Phalaris arundinacea</i>		100	Y	FACW 2	<b>Hydrophytic Vegetation Indicators:</b>		
2. _____					Rapid Test for Hydrophytic Veg.		
3. _____					x	Dominance Test is >50%	
4. _____					x	Prevalence Index is ≤3.0*	
5. _____						Morphological Adaptations*	
6. _____						Problematic Hydrophytic Vegetation*	
7. _____							
8. _____		100	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				<b>Hydrophytic Vegetation Present?</b>		
1. _____					Yes	x No	
2. _____		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-4	10YR 3/1	100					Si C L	
4-8	10YR 3/1	95	10YR 5/6	5	C	M	Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Rip-rap</b>	<b>Hydric Soil Present?</b> <b>Yes</b> <b>x</b> <b>No</b>
	8	
Remarks: _____		

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input checked="" type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      x				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport			City/County:				Date:	28 March 2024		Data Point:	32A		
Client:	AEP			State:	OH			Section, Township, Range:			Sec S26, T 15N, R 19W			
Investigator(s):	N. Houk, N. Barnett							Landform	Till Plains		Local Relief	Convex		
Slope (%):	2-5		Lat.	39.754906		Long.	-82.634636		Datum	NAD83		NWI Class:	N/A	
Soil Map Unit Name: Marengo clay loam														
Climatic/hydrologic conditions typical for time of year? Y/N Y														
Vegetation N, Soil N or Hydrology N significantly disturbed														
Vegetation N, Soil N or Hydrology N naturally problematic														
Are Normal Circumstances Present? Yes x No														

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1. _____					Number of dominant species that are OBL, FACW <sub>1</sub> or FAC:	0	
2. _____					Total number of dominant species across all strata:	1	
3. _____					Percent of dominant species that are OBL, FACW, or FAC:	0.00	
4. _____					<b>Prevalence Index Worksheet</b>		
5. _____		0	Total Cover		Total % cover of:		
<b>Shrub Stratum</b>	<b>Plot size: 15'</b>				OBL species	0 x 1 = 0	
1. _____					FACW species	10 x 2 = 20	
2. _____					FAC species	20 x 3 = 60	
3. _____					FACU species	70 x 4 = 280	
4. _____					UPL species	0 x 5 = 0	
5. _____		0	Total Cover		Total	100 = 360	
<b>Herb Stratum</b>	<b>Plot size: 5'</b>				Prevalence Index:	3.60	
1. <i>Sorghum halepense</i>		60	Y	FACU 4	<b>Hydrophytic Vegetation Indicators:</b>		
2. <i>Ambrosia trifida</i>		10	N	FAC 3	Rapid Test for Hydrophytic Veg.		
3. <i>Conium maculatum</i>		10	N	FACW 2	Dominance Test is >50%		
4. <i>Solidago canadensis</i>		10	N	FACU 4	Prevalence Index is <3.0*		
5. <i>Vernonia gigantea</i>		10	N	FAC 3	Morphological Adaptations*		
6. _____					Problematic Hydrophytic Vegetation*		
7. _____					*Indicators of hydric soil and wetland hydrology must be present, unless		
8. _____					disturbed or problematic		
		100	Total Cover		<b>Hydrophytic Vegetation Present?</b>		
<b>Woody Vine Stratum</b>	<b>Plot size: 30'</b>				Yes	No x	
1. _____							
2. _____							
		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/1	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____ Remarks: _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
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Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      x				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: \_\_\_\_\_ Date: 28 March 2024 Data Point: 31A  
 Client: AEP State: OH Section, Township, Range: Sec S26, T 15N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform Moraines Local Relief Convex  
 Slope (%): 1-3 Lat. 39.753261 Long. -82.635187 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Centerville silt loam, 2 to 6 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the DP within a Wetland? Yes _____ No <u>x</u>
Hydric Soil Present? Yes _____ No <u>x</u>	
Wetland Hydrology Present? Yes _____ No <u>x</u>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Schedonorus arundinaceus</i>		50	Y	FACU	4
2. <i>Poa pratensis</i>		45	Y	FAC	3
3. <i>Lamium purpureum</i>		5	N	UPL	5
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/3	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____ Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No x

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
_____ Water Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soil (C6)	
_____ Thin Muck Surface (C7)	
_____ Gauge or Well Data (D9)	
_____ Other	

Field Observations: Surface Water Present? Yes \_\_\_\_\_ No x Depth (inches) \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No x Depth (inches) \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No x Depth (inches) \_\_\_\_\_

Hydrology Indicators Present? Yes \_\_\_\_\_ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



Site: <u>W. Lancaster-S. Baltimore-W. Millersport</u>			City/County: _____			Date: <u>28 March 2024</u>		Data Point: <u>26</u>	
Client: <u>AEP</u>			State: <u>OH</u>		Section, Township, Range: <u>Sec 26, T 15N, R 19W</u>				
Investigator(s): <u>N. Houk, N. Barnett</u>			Landform: <u>Moraines</u>			Local Relief: <u>Convex</u>			
Slope (%): <u>1-3</u>		Lat. <u>39.743462</u>		Long. <u>-82.638348</u>		Datum: <u>NAD83</u>		NWI Class: <u>N/A</u>	
Soil Map Unit Name: <u>Centersburg silt loam, 2 to 6 percent slopes</u>									
Climatic/hydrologic conditions typical for time of year?				Y/N		Y			
Vegetation <u>N</u>		Soil <u>N</u>		or Hydrology <u>N</u>		significantly disturbed			
Vegetation <u>N</u>		Soil <u>N</u>		or Hydrology <u>N</u>		naturally problematic			
Are Normal Circumstances Present?			Yes <u>x</u>		No _____				

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet			
1.						Number of dominant species that are OBL, FACW, or FAC:			
2.						Total number of dominant species across all strata:			
3.						Percent of dominant species that are OBL, FACW, or FAC:			
4.						Total % cover of:			
5.			0	Total Cover		Prevalence Index Worksheet			
Shrub Stratum		Plot size: 15'				OBL species 0 x 1 0			
1.	<i>Pyrus calleryana</i>		40	Y	UPL 5	FACW species 0 x 2 0			
2.	<i>Lonicera maackii</i>		10	Y	UPL 5	FAC species 0 x 3 0			
3.						FACU species 75 x 4 300			
4.						UPL species 75 x 5 375			
5.						Total 150 675			
Herb Stratum		Plot size: 5'				Prevalence Index: 4.50			
1.	<i>Stellaria media</i>		50	Y	FACU 4	Hydrophytic Vegetation Indicators:			
2.	<i>Euonymus fortunei</i>		20	Y	UPL 5	Rapid Test for Hydrophytic Veg.			
3.	<i>Allium vineale</i>		10	N	FACU 4	Dominance Test is >50%			
4.	<i>Cirsium arvense</i>		10	N	FACU 4	Prevalence Index is ≤3.0*			
5.	<i>Digitaria sanguinalis</i>		5	N	FACU 4	Morphological Adaptations*			
6.	<i>Lamium purpureum</i>		5	N	UPL 5	Problematic Hydrophytic Vegetation*			
7.						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
8.						Hydrophytic Vegetation Present?			
Woody Vine Stratum		Plot size: 30'				Yes No x			
1.									
2.									
Remarks:			0	Total Cover					

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					SiCL	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>		
	<b>Yes</b>	<b>No</b>	<b>X</b>

Remarks: _____
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<b>Wetland Hydrology Indicators:</b>					
<b>Primary Indicators (check all that apply)</b>				<b>Secondary Indicators</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>		<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>		<input type="checkbox"/>
<b>Field Observations:</b>	<b>Surface Water Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>	<b>Depth (inches)</b>
	<b>Water Table Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>	<b>Depth (inches)</b>
	<b>Saturation Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>	<b>Depth (inches)</b>
				<b>Hydrology Indicators Present?</b>	
				<b>Yes</b>	<b>No      x</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	28 March 2024	Data Point:	23
Client:	AEP	State:	OH	Section, Township, Range:	Sec S35, T 15N, R 19W		
Investigator(s):	N. Houk, N. Barnett	Landform	Terraces	Local Relief	Convex		
Slope (%):	1-3	Lat.	39.737525	Long.	-82.641287	Datum	NAD83
Soil Map Unit Name:	Fox silt loam, 0 to 2 percent slopes						
Climatic/hydrologic conditions typical for time of year?	Y/N	Y					
Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed	
Vegetation	N	Soil	N	or Hydrology	N	naturally problematic	
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes	_____	No	<u>x</u>	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	_____	No	<u>x</u>	
Wetland Hydrology Present? Yes	_____	No	<u>x</u>	
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Schedonorus arundinaceus</i>		40	Y	FACU 4
2.	<i>Poa pratensis</i>		30	Y	FAC 3
3.	<i>Trifolium repens</i>		20	Y	FACU 4
4.	<i>Digitaria sanguinalis</i>		5	N	FACU 4
5.	<i>Plantago lanceolata</i>		5	N	FACU 4
6.					
7.					
8.					
			100	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	
Remarks:					

**Dominance Test Worksheet**

Number of dominant species 1

that are OBL, FACW, or FAC: 3

Total number of dominant species across all strata: 33.33

Percent of dominant species that are OBL, FACW, or FAC: 33.33

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x 1	0
FACW species	0	x 2	0
FAC species	30	x 3	90
FACU species	70	x 4	280
UPL species	0	x 5	0
Total	100		370

Prevalence Index: 3.70

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. Dominance Test is >50%

Prevalence Index is ≤3.0\*

Morphological Adaptations\*

Problematic Hydrophytic Vegetation\*

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	x
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Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/3	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____		<b>Hydric Soil Present?</b>		<b>Yes</b>	<b>No</b>	<b>x</b>
Depth (Inches): _____						
Remarks: _____						

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Field Observations:</b>					<b>Hydrology Indicators Present?</b>				
Surface Water Present?	Yes	No	x	Depth (inches)	<b>Yes</b> <b>No</b> <b>x</b>				
Water Table Present?	Yes	No	x	Depth (inches)					
Saturation Present?	Yes	No	x	Depth (inches)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	28 March 2024	Data Point:	22
Client:	AEP	State:	OH	Section, Township, Range:	Sec S 34, T 15N, R 19W		
Investigator(s):	N. Houk, N. Barnett			Landform	Terrances	Local Relief	Convex
Slope (%):	1-3	Lat.	39.735590	Long.	-82.641314	Datum	NAD83
						NWI Class:	N/A
Soil Map Unit Name:	Fox silt loam, 0 to 2 percent slopes						
Climatic/hydrologic conditions typical for time of year?				Y/N	Y		
Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed	
Vegetation	N	Soil	N	or Hydrology	N	naturally problematic	
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet			
1.						Number of dominant species that are OBL, FACW <sub>i</sub> or FAC:			
2.						Total number of dominant species across all strata:			
3.						Percent of dominant species that are OBL, FACW <sub>i</sub> or FAC:			
4.						Prevalence Index Worksheet			
5.						Total % cover of:			
			0	Total Cover		OBL species	0	x 1	0
						FACW species	0	x 2	0
						FAC species	40	x 3	120
						FACU species	45	x 4	180
						UPL species	45	x 5	225
						Total	130		525
						Prevalence Index: 4.04			
Shrub Stratum						Hydrophytic Vegetation Indicators:			
Plot size: 15'						Rapid Test for Hydrophytic Veg.			
1.	<i>Pyrus calleryana</i>		40	Y	UPL	5	Dominance Test is >50%		
2.							Prevalence Index is ≤3.0*		
3.							Morphological Adaptations*		
4.							Problematic Hydrophytic Vegetation*		
5.							*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
			40	Total Cover			Hydrophytic Vegetation Present?		
						Yes	No	x	
Herb Stratum									
Plot size: 5'									
1.	<i>Andropogon virginicus</i>		40	Y	FACU	4			
2.	<i>Setaria pumila</i>		30	Y	FAC	3			
3.	<i>Verbena urticifolia</i>		10	N	FAC	3			
4.	<i>Daucus carota</i>		5	N	UPL	5			
5.	<i>Solidago canadensis</i>		5	N	FACU	4			
6.									
7.									
8.									
			90	Total Cover					
Woody Vine Stratum									
Plot size: 30'									
1.									
2.									
			0	Total Cover					
Remarks:									

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-7	10YR 3/3	100					Si C L	
7-18	10YR 4/3	100					L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>		
	Yes	No	x
Remarks: _____			

Wetland Hydrology Indicators:					
Primary Indicators (check all that apply)				Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>		<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>		<input type="checkbox"/>
<b>Field Observations:</b>	Surface Water Present?	Yes	No	x	Depth (inches)
	Water Table Present?	Yes	No	x	Depth (inches)
	Saturation Present?	Yes	No	x	Depth (inches)
				<b>Hydrology Indicators Present?</b>	
				<b>Yes</b>	<b>No</b>
				<b>Yes</b>	<b>No</b>
				<b>Yes</b>	<b>No</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 20  
 Client: AEP State: OH Section, Township, Range: Sec S35, T 15N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform Flood Plains Local Relief Convex  
 Slope (%): 1-3 Lat. 39.731196 Long. -82.636576 Datum NAD83 NWI Class: N/A  
 Soil Map Unit Name: Aetna silt loam, occasionally flooded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 3 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 0 FACW species 0 x 2 0 FAC species 0 x 3 0 FACU species 40 x 4 160 UPL species 60 x 5 300 Total 100 460 Prevalence Index: 4.60
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Glycine max</i> residue		40	Y	UPL 5	
2. <i>Stellaria media</i>		40	Y	FACU 4	
3. <i>Lamium purpureum</i>		20	Y	UPL 5	
4.					
5.					
6.					
7.					
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		
Remarks:					<b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No x

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

___ Histosol (A1)	___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F6)
___ Histic Epipedon (A2)	___ 5cm Mucky Peat or Peat	___ Depleted Dark Surface (F7)
___ Black Histic (A3)	___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)
___ Hydrogen Sulfide (A4)	___ Sandy Redox (S5)	___ Indicators for Problematic Hydric Soils
___ Stratified Layers (A5)	___ Stripped Matrix (S6)	___ Coast Prairie Redox (A16)
___ 2 cm Muck (A10)	___ Loamy Mucky Mineral (F1)	___ Iron-Manganese Masses (F12)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Very Shallow Dark Surface (F12)
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes

No

x

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
___ Surface Water (A1)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Drainage Patterns (B10)
___ Saturation (A3)	___ Dry-Season Water Table (C2)
___ Water Marks (B1)	___ Crayfish Burrows (C8)
___ Sediment Deposits (B2)	___ Saturation Visible on Aerial Imagery (C9)
___ Drift Deposits (B3)	___ Stunted or Stressed Plants (D1)
___ Algal Mat or Crust (B4)	___ Geomorphic Position (D2)
___ Iron Deposits (B5)	___ FAC-Neutral Test (D5)
___ Inundation Visible on Aerial Imagery (B7)	
___ Sparsely Vegetated Concave Surface	
___ Water Stained Leaves (B9)	
___ Aquatic Fauna (B13)	
___ True Aquatic Plants (B14)	
___ Hydrogen Sulfide Odor (C1)	
___ Oxidized Rhizospheres on Living Roots	
___ Presence of Reduced Iron (C4)	
___ Recent Iron Reduction in Tilled Soil (C6)	
___ Thin Muck Surface (C7)	
___ Gauge or Well Data (D9)	
___ Other	
Field Observations: Surface Water Present? Yes No x Depth (inches)	Hydrology Indicators Present? Yes No x
Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 15  
Client: AEP State: OH Section, Township, Range: Sec S2, T 14N, R 19W  
Investigator(s): N. Houk, N. Barnett Landform: Flood Plains Local Relief: Convex  
Slope (%): 1-3 Lat. 39.725039 Long. -82.632003 Datum: NAD83 NWI Class: N/A  
Soil Map Unit Name: Aetna silt loam, occasionally flooded  
Climatic/hydrologic conditions typical for time of year? Y/N Y  
Vegetation N, Soil N or Hydrology N significantly disturbed  
Vegetation N, Soil N or Hydrology N naturally problematic  
Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland?
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes No <input checked="" type="checkbox"/>
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Sambucus canadensis</i>		2	N	FACU	4
2.					
3.					
4.					
5.					
		2	Total Cover		
Herb Stratum	Plot size: 30'				
1. <i>Poa pratensis</i>		40	Y	FAC	3
2. <i>Conium maculatum</i>		20	Y	FACW	2
3. <i>Echinacea pallida</i>		20	Y	UPL	5
4. <i>Phalaris arundinacea</i>		10	N	FACW	2
5.					
6.					
7.					
8.					
		90	Total Cover		
Woody Vine Stratum	Plot size: 5'				
1.					
2.					
		0	Total Cover		

**Dominance Test Worksheet**  
Number of dominant species that are OBL, FACW, or FAC: 2  
Total number of dominant species across all strata: 3  
Percent of dominant species that are OBL, FACW, or FAC: 66.67  
**Prevalence Index Worksheet**  
Total % cover of:  
OBL species 0 x 1 0  
FACW species 30 x 2 60  
FAC species 40 x 3 120  
FACU species 2 x 4 8  
UPL species 20 x 5 100  
Total 92 288  
Prevalence Index: 3.13  
**Hydrophytic Vegetation Indicators:**  
Rapid Test for Hydrophytic Veg. x  
Dominance Test is >50%  
Prevalence Index is ≤3.0\*  
Morphological Adaptations\*  
Problematic Hydrophytic Vegetation\*  
\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  
**Hydrophytic Vegetation Present?**  
Yes ☒ No ☐

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other
<b>Restrictive Layer (if observed):</b> Type:		
Depth (Inches):		
	<b>Hydric Soil Present?</b>	Yes No <input checked="" type="checkbox"/>

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)				Secondary Indicators	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)		<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Geomorphic Position (D2)		<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)				
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other				
<b>Field Observations:</b> Surface Water Present? Yes No <input checked="" type="checkbox"/>	Depth (inches)			<b>Hydrology Indicators Present?</b>	
Water Table Present? Yes No <input checked="" type="checkbox"/>	Depth (inches)			Yes No <input checked="" type="checkbox"/>	
Saturation Present? Yes No <input checked="" type="checkbox"/>	Depth (inches)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:



# WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 13  
 Client: AEP State: OH Section, Township, Range: Sec S2, T 14N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform Till Plains Local Relief Convex  
 Slope (%): 1-3 Lat. 39.722039 Long. -82.634875 Datum NAD83 NWI Class: NA  
 Soil Map Unit Name: Urban land-Bennington complex, 0 to 6 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <u></u> No <u>x</u>	Is the DP within a Wetland? Yes <u></u> No <u>x</u>
Hydric Soil Present? Yes <u></u> No <u>x</u>	
Wetland Hydrology Present? Yes <u></u> No <u>x</u>	
Remarks:	

## VEGETATION

Tree Stratum	Plot size: <u>30'</u>	Absolute % Cover	Dominant Species	Indicator Status	<b>Dominance Test Worksheet</b> Number of dominant species <u>1</u> that are OBL, FACW, or FAC: Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> <b>Prevalence Index Worksheet</b> Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>60</u> x <u>3</u> = <u>180</u> FACU species <u>40</u> x <u>4</u> = <u>160</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>3.40</u>
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		<u>0</u>	Total Cover		
<b>Shrub Stratum</b>	<b>Plot size: <u>15'</u></b>				
1. <u></u>					
2. <u></u>					
3. <u></u>					
4. <u></u>					
5. <u></u>		<u>0</u>	Total Cover		
<b>Herb Stratum</b>	<b>Plot size: <u>5'</u></b>				
1. <u>Poa pratensis</u>		<u>60</u>	<u>Y</u>	<u>FAC</u>	<u>3</u>
2. <u>Glechoma hederacea</u>		<u>20</u>	<u>Y</u>	<u>FACU</u>	<u>4</u>
3. <u>Trifolium repens</u>		<u>20</u>	<u>Y</u>	<u>FACU</u>	<u>4</u>
4. <u></u>					
5. <u></u>					
6. <u></u>					
7. <u></u>					
8. <u></u>					
		<u>100</u>	Total Cover		
<b>Woody Vine Stratum</b>	<b>Plot size: <u>30'</u></b>				
1. <u></u>					
2. <u></u>					
		<u>0</u>	Total Cover		
Remarks:					<b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is ≤3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes <u></u> No <u>x</u>

## SOIL

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/2	100					Si C L	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators:</b>								
<u></u> Histosol (A1)	<u></u> Sandy Mucky Mineral (S1)			<u></u> Redox Dark Surface (F6)				
<u></u> Histic Epipedon (A2)	<u></u> 5cm Mucky Peat or Peat			<u></u> Depleted Dark Surface (F7)				
<u></u> Black Histic (A3)	<u></u> Sandy Gleyed Matrix (S4)			<u></u> Redox Depressions (F8)				
<u></u> Hydrogen Sulfide (A4)	<u></u> Sandy Redox (S5)			<b>Indicators for Problematic Hydric Soils</b>				
<u></u> Stratified Layers (A5)	<u></u> Stripped Matrix (S6)			<u></u> Coast Prairie Redox (A16)				
<u></u> 2 cm Muck (A10)	<u></u> Loamy Mucky Mineral (F1)			<u></u> Iron-Manganese Masses (F12)				
<u></u> Depleted Below Dark Surface (A11)	<u></u> Loamy Gleyed Matrix (F2)			<u></u> Very Shallow Dark Surface (F12)				
<u></u> Thick Dark Surface (A12)	<u></u> Depleted Matrix (F3)			<u></u> Other				
<b>Restrictive Layer (if observed):</b> Type: <u></u>								
Depth (Inches): <u></u>						<b>Hydric Soil Present?</b> Yes <u></u> No <u>x</u>		
Remarks:								

## HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators	
Primary Indicators (check all that apply)					
<u></u> Surface Water (A1)	<u></u> Water Stained Leaves (B9)	<u></u>	<u></u>	<u></u> Surface Soil Cracks (B6)	
<u></u> High Water Table (A2)	<u></u> Aquatic Fauna (B13)	<u></u>	<u></u>	<u></u> Drainage Patterns (B10)	
<u></u> Saturation (A3)	<u></u> True Aquatic Plants (B14)	<u></u>	<u></u>	<u></u> Dry-Season Water Table (C2)	
<u></u> Water Marks (B1)	<u></u> Hydrogen Sulfide Odor (C1)	<u></u>	<u></u>	<u></u> Crayfish Burrows (C8)	
<u></u> Sediment Deposits (B2)	<u></u> Oxidized Rhizospheres on Living Roots	<u></u>	<u></u>	<u></u> Saturation Visible on Aerial Imagery (C9)	
<u></u> Drift Deposits (B3)	<u></u> Presence of Reduced Iron (C4)	<u></u>	<u></u>	<u></u> Stunted or Stressed Plants (D1)	
<u></u> Algal Mat or Crust (B4)	<u></u> Recent Iron Reduction in Tilled Soil (C6)	<u></u>	<u></u>	<u></u> Geomorphic Position (D2)	
<u></u> Iron Deposits (B5)	<u></u> Thin Muck Surface (C7)	<u></u>	<u></u>	<u></u> FAC-Neutral Test (D5)	
<u></u> Inundation Visible on Aerial Imagery (B7)	<u></u> Gauge or Well Data (D9)	<u></u>	<u></u>		
<u></u> Sparsely Vegetated Concave Surface	<u></u> Other	<u></u>	<u></u>		
<b>Field Observations:</b> Surface Water Present? Yes <u></u> No <u>x</u> Depth (inches) <u></u>				<b>Hydrology Indicators Present?</b>	
Water Table Present? Yes <u></u> No <u>x</u> Depth (inches) <u></u>				Yes <u></u> No <u>x</u>	
Saturation Present? Yes <u></u> No <u>x</u> Depth (inches) <u></u>					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	28 March 2024	Data Point:	11
Client:	AEP	State:	OH	Section, Township, Range:	Sec S3, T 14N, R 19W		
Investigator(s):	N. Houk, N. Barnett		Landform	Till Plains	Local Relief	Convex	
Slope (%):	1-3	Lat.	39.718202	Long.	-82.639982	Datum	NAD83
						NWI Class:	NA
Soil Map Unit Name:	Marengo clay loam						
Climatic/hydrologic conditions typical for time of year?				Y/N	Y		
Vegetation		N		N	or Hydrology	N	significantly disturbed
Vegetation		N		N	or Hydrology	N	naturally problematic
Are Normal Circumstances Present?		Yes	x	No			

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet		
1.					Number of dominant species that are OBL, FACW <sub>1</sub> or FAC:	0	
2.					Total number of dominant species across all strata:	2	
3.					Percent of dominant species that are OBL, FACW, or FAC:	0.00	
4.					<b>Prevalence Index Worksheet</b>		
5.					Total % cover of:		
		0	Total Cover		OBL species	0 x 1 = 0	
<u>Shrub Stratum</u>	Plot size: 15'				FACW species	0 x 2 = 0	
1.					FAC species	0 x 3 = 0	
2.					FACU species	95 x 4 = 380	
3.					UPL species	5 x 5 = 25	
4.					Total	100 = 405	
5.					Prevalence Index:	4.05	
		0	Total Cover		<b>Hydrophytic Vegetation Indicators:</b>		
<u>Herb Stratum</u>	Plot size: 5'				Rapid Test for Hydrophytic Veg.		
1. <i>Dactylis glomerata</i>		75	Y	FACU 4	Dominance Test is >50%		
2. <i>Schedonorus arundinaceus</i>		20	Y	FACU 4	Prevalence Index is <3.0*		
3. <i>Lamium purpureum</i>		5	N	UPL 5	Morphological Adaptations*		
4.					Problematic Hydrophytic Vegetation*		
5.							
6.							
7.							
8.							
		100	Total Cover		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
<u>Woody Vine Stratum</u>	Plot size: 30'				<b>Hydrophytic Vegetation Present?</b>		
1.					Yes	No	
2.					x		
		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____ Remarks: _____	<b>Hydric Soil Present?</b> <b>Yes</b> <b>No</b> <b>x</b>		
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Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Water Stained Leaves (B9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Gauge or Well Data (D9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sparsely Vegetated Concave Surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Field Observations:</b>	Surface Water Present?	Yes	No	x	Depth (inches)	<b>Hydrology Indicators Present?</b> Yes      No      x			
	Water Table Present?	Yes	No	x	Depth (inches)				
	Saturation Present?	Yes	No	x	Depth (inches)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	28 March 2024	Data Point:	8A
Client:	AEP	State:	OH	Section, Township, Range:	Sec S3, T 14N, R 19W		
Investigator(s):	N. Houk, N. Barnett	Landform	Till Plains1	Local Relief	Convex		
Slope (%):	3-5	Lat.	39.714393	Long.	-82.641548	Datum	NAD83
Soil Map Unit Name:	Amanda silt loam, 12 to 20 percent slopes, eroded						
Climatic/hydrologic conditions typical for time of year?	Y/N	Y					
Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed	
Vegetation	N	Soil	N	or Hydrology	N	naturally problematic	
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes	_____	No	<u>  x  </u>	Is the DP within a Wetland? Yes            No            x
Hydric Soil Present? Yes	_____	No	<u>  x  </u>	
Wetland Hydrology Present? Yes	_____	No	<u>  x  </u>	
Remarks:				

ECOTYPE					Dominance Test Worksheet		
Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Number of dominant species that are OBL, FACW, or FAC:		
1.					Total number of dominant species across all strata:		
2.					Percent of dominant species that are OBL, FACW, or FAC:		
3.					Prevalence Index Worksheet		
4.					Total % cover of:		
5.		0	Total Cover		OBL species	0 x 1	0
Shrub Stratum Plot size: 15'					FACW species	0 x 2	0
1.	<i>Sassafras albidum</i>	75	Y	FACU 4	FAC species	30 x 3	90
2.	<i>Rosa multiflora</i>	10	N	FACU 4	FACU species	140 x 4	560
3.	<i>Rubus allegheniensis</i>	5	N	FACU 4	UPL species	5 x 5	25
4.	<i>Rubus occidentalis</i>	5	N	UPL 5	Total	175	675
5.		95	Total Cover		Prevalence Index: 3.86		
Herb Stratum Plot size: 5'					Hydrophytic Vegetation Indicators:		
1.	<i>Dactylis glomerata</i>	50	Y	FACU 4	Rapid Test for Hydrophytic Veg.		
2.	<i>Geum canadense</i>	20	Y	FAC 3	Dominance Test is >50%		
3.	<i>Alliaria petiolata</i>	10	N	FAC 3	Prevalence Index is <3.0*		
4.					Morphological Adaptations*		
5.					Problematic Hydrophytic Vegetation*		
6.					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
7.					Hydrophytic Vegetation Present?		
8.		80	Total Cover		Yes	No	X
Woody Vine Stratum Plot size: 30'							
1.							
2.							
		0	Total Cover				
Remarks:							

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-8	10YR 3/2	100					Si C L	
8-18	10YR 4/3	100					Si C L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

Restrictive Layer (if observed): Type: _____ Depth (Inches): _____	Hydric Soil Present?	Yes	No	x
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
<input type="checkbox"/>	Surface Water Present?	Yes	No	x	Depth (inches)				
<input type="checkbox"/>	Water Table Present?	Yes	No	x	Depth (inches)				
<input type="checkbox"/>	Saturation Present?	Yes	No	x	Depth (inches)				
<b>Hydrology Indicators Present?</b>									
					<b>Yes      No      x</b>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	28 March 2024		Data Point:	7	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S3, T 14N, R 19W		
Investigator(s):	N. Houk, N. Barnett		Landform			Till Plains		Local Relief		Convex	
Slope (%):	1-3		Lat.	39.712451		Long.	-82.641544		Datum	NAD83	
Soil Map Unit Name:			Amanda silt loam, 6 to 12 percent slopes, eroded								
Climatic/hydrologic conditions typical for time of year?			Y/N		Y						
Vegetation			N		or Hydrology		N significantly disturbed				
Vegetation			N		or Hydrology		N naturally problematic				
Are Normal Circumstances Present?			Yes		x		No				

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet				
1.						Number of dominant species that are OBL, FACW, or FAC:				
2.						Total number of dominant species across all strata:				
3.						Percent of dominant species that are OBL, FACW, or FAC:				
4.						Total % cover of:				
5.			0	Total Cover		OBL species	0	x 1	0	
Shrub Stratum		Plot size: 15'				FACW species	0	x 2	0	
1.	<i>Rubus occidentalis</i>		10	Y	UPL	5	FAC species	30	x 3	90
2.	<i>Rosa multiflora</i>		3	N	FACU	4	FACU species	73	x 4	292
3.						UPL species	10	x 5	50	
4.						Total	113		432	
5.			13	Total Cover		Prevalence Index: 3.82				
Herb Stratum		Plot size: 5'				Hydrophytic Vegetation Indicators:				
1.	<i>Dactylis glomerata</i>		35	Y	FACU	4	Rapid Test for Hydrophytic Veg.			
2.	<i>Panicum virgatum</i>		30	Y	FAC	3	Dominance Test is >50%			
3.	<i>Solidago canadensis</i>		20	Y	FACU	4	Prevalence Index is ≤3.0*			
4.	<i>Schedonorus arundinaceus</i>		10	N	FACU	4	Morphological Adaptations*			
5.	<i>Taraxacum officinale</i>		5	N	FACU	4	Problematic Hydrophytic Vegetation*			
6.						*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic				
7.						Hydrophytic Vegetation Present?				
8.						Yes	No	x		
Woody Vine Stratum		Plot size: 30'								
1.										
2.										
Remarks:			0	Total Cover						

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)							
Matrix			Redox Features				
Depth (inches)	Color	%	Color	%	Type*	Loc**	Remarks
0-4	10YR 3/3	100					Si L
4-18	10YR 4/4	100					Si C L

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>		
	<b>Yes</b>	<b>No</b>	<b>x</b>
Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches) Saturation Present? Yes No x Depth (inches)					<b>Hydrology Indicators Present?</b> Yes No x				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



Site:	W. Lancaster-S. Baltimore-W. Millersport		City/County:	Fairfield County		Date:	28 March 2024		Data Point:	5A	
Client:	AEP		State:	OH		Section, Township, Range:			Sec S10, T 14N, R 19W		
Investigator(s):	N. Houk, N. Barnett		Landform			Till Plains		Local Relief		Convex	
Slope (%):	1-3		Lat.	39.707972		Long.	-82.640540		Datum	NAD83	
Soil Map Unit Name:			Amanda silt loam, 6 to 12 percent slopes								
Climatic/hydrologic conditions typical for time of year?			Y/N		Y						
Vegetation			N		or Hydrology		N significantly disturbed				
Vegetation			N		or Hydrology		N naturally problematic				
Are Normal Circumstances Present?			Yes		x		No				

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	
Remarks:			

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Shrub Stratum		Plot size: 15'			
1.					
2.					
3.					
4.					
5.					
			0	Total Cover	
Herb Stratum		Plot size: 5'			
1.	<i>Zea mays residue</i>		60	Y	UPL 5
2.	<i>Stellaria media</i>		20	Y	FACU 4
3.	<i>Lamium purpureum</i>		10	N	UPL 5
4.					
5.					
6.					
7.					
8.					
			90	Total Cover	
Woody Vine Stratum		Plot size: 30'			
1.					
2.					
			0	Total Cover	
Remarks:					

**Dominance Test Worksheet**

Number of dominant species \_\_\_\_\_ 0

that are OBL, FACW, or FAC: \_\_\_\_\_

Total number of dominant species \_\_\_\_\_ 2

species across all strata: \_\_\_\_\_

Percent of dominant species that are OBL, FACW, or FAC: \_\_\_\_\_ 0.00

**Prevalence Index Worksheet**

Total % cover of: \_\_\_\_\_

OBL species	0	x 1	0
FACW species	0	x 2	0
FAC species	0	x 3	0
FACU species	20	x 4	80
UPL species	70	x 5	350
Total	90		430

Prevalence Index: 4.78

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. \_\_\_\_\_

Dominance Test is >50% \_\_\_\_\_

Prevalence Index is ≤3.0\* \_\_\_\_\_

Morphological Adaptations\* \_\_\_\_\_

Problematic Hydrophytic Vegetation\* \_\_\_\_\_

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	x
-----	----	---

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/4	100					Si L	
*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    **Location: PL=Pore Lining, M=Matrix								
<b>Hydric Soil Indicators:</b>								
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)					<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat					<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)					<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)					<b>Indicators for Problematic Hydric Soils</b>		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)					<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)					<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)					<input type="checkbox"/> Very Shallow Dark Surface (F12)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)					<input type="checkbox"/> Other		
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____						<b>Hydric Soil Present?</b>		
Remarks: _____						<b>Yes</b>	<b>No</b>	<b>x</b>

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)	<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<b>Field Observations:</b> Surface Water Present?    Yes                      No                      x                      Depth (inches) Water Table Present?        Yes                      No                      x                      Depth (inches) Saturation Present?          Yes                      No                      x                      Depth (inches)					<b>Hydrology Indicators Present?</b> <div> <div>Yes</div> <div>No</div> <div>x</div> </div>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 3A  
 Client: AEP State: OH Section, Township, Range: Sec S10, T 14N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform: Till Plains Local Relief: Convex  
 Slope (%): 1-3 Lat. 39.704089 Long. -82.639314 Datum: NAD83 NWI Class: NA  
 Soil Map Unit Name: Amanda silt loam, 6 to 12 percent slopes, eroded  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes	No	x	Is the DP within a Wetland? Yes No x
Hydric Soil Present? Yes	No	x	
Wetland Hydrology Present? Yes	No	x	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.					<b>Dominance Test Worksheet</b> Number of dominant species that are OBL, FACW, or FAC: 0 Total number of dominant species across all strata: 1 Percent of dominant species that are OBL, FACW, or FAC: 0.00 <b>Prevalence Index Worksheet</b> Total % cover of: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Total 100 = 400 Prevalence Index: 4.00 <b>Hydrophytic Vegetation Indicators:</b> Rapid Test for Hydrophytic Veg. Dominance Test is >50% Prevalence Index is ≤3.0* Morphological Adaptations* Problematic Hydrophytic Vegetation* *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Hydrophytic Vegetation Present?</b> Yes No x
2.					
3.					
4.					
5.					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1.					
2.					
3.					
4.					
5.					
		0	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Schedonorus arundinaceus</i>		100	Y	FACU	4
2.					
3.					
4.					
5.					
6.					
7.					
8.					
		100	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1.					
2.					
		0	Total Cover		

Remarks:

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 4/4	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

## Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____ Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type:

Depth (Inches):

Hydric Soil Present?

Yes

No

x

Remarks:

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	
_____ Sparsely Vegetated Concave Surface	
_____ Water Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soil (C6)	
_____ Thin Muck Surface (C7)	
_____ Gauge or Well Data (D9)	
_____ Other	
<b>Field Observations:</b> Surface Water Present? Yes No x Depth (inches)	<b>Hydrology Indicators Present?</b> Yes No x
Water Table Present? Yes No x Depth (inches)	
Saturation Present? Yes No x Depth (inches)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	



Site:	W. Lancaster-S. Baltimore-W. Millersport	City/County:	Fairfield County	Date:	28 March 2024	Data Point:	1A
Client:	AEP	State:	OH	Section, Township, Range:	Sec S10, T 14N, R 19W		
Investigator(s):	N. Houk, N. Barnett	Landform	Flood Plains	Local Relief	Convex		
Slope (%):	1-3	Lat.	39.701956	Long.	-82.638831	Datum	NAD83
Soil Map Unit Name:	Aetna silt loam, occasionally flooded						
Climatic/hydrologic conditions typical for time of year?	Y/N	Y					
Vegetation	N	Soil	N	or Hydrology	N	significantly disturbed	
Vegetation	N	Soil	N	or Hydrology	N	naturally problematic	
Are Normal Circumstances Present?	Yes	x	No				

Hydrophytic Vegetation Present? Yes	_____	No	<u>x</u>	Is the DP within a Wetland? Yes      No      x
Hydric Soil Present? Yes	_____	No	<u>x</u>	
Wetland Hydrology Present? Yes	_____	No	<u>x</u>	
Remarks:				

Tree Stratum		Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1.	<i>Juglans nigra</i>		20	Y	FACU	4
2.	<i>Robinia pseudoacacia</i>		10	Y	FACU	4
3.						
4.						
5.						
			30	Total Cover		
Shrub Stratum		Plot size: 15'				
1.	<i>Robinia pseudoacacia</i>		30	Y	FACU	4
2.	<i>Juglans nigra</i>		20	Y	FACU	4
3.						
4.						
5.						
			50	Total Cover		
Herb Stratum		Plot size: 5'				
1.	<i>Conium maculatum</i>		70	Y	FACW	2
2.	<i>Allium vineale</i>		10	N	FACU	4
3.	<i>Lamium purpureum</i>		10	N	UPL	5
4.	<i>Symphyotrichum ericoides</i>		10	N	FACU	4
5.						
6.						
7.						
8.						
			100	Total Cover		
Woody Vine Stratum		Plot size: 30'				
1.						
2.						
			0	Total Cover		
Remarks:						

**Dominance Test Worksheet**

Number of dominant species that are OBL, FACW, or FAC: 1

Total number of dominant species across all strata: 5

Percent of dominant species that are OBL, FACW, or FAC: 20.00

**Prevalence Index Worksheet**

Total % cover of:

OBL species	0	x 1	0
FACW species	70	x 2	140
FAC species	0	x 3	0
FACU species	100	x 4	400
UPL species	10	x 5	50
Total	180		590

Prevalence Index: 3.28

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Veg. ☐

Dominance Test is >50% ☐

Prevalence Index is ≤3.0\* ☐

Morphological Adaptations\* ☐

Problematic Hydrophytic Vegetation\* ☐

\*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Hydrophytic Vegetation Present?**

Yes	No	x
-----	----	---

Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)								
Depth (inches)	Matrix		Redox Features					
	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/3	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains    \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5cm Mucky Peat or Peat	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils</b>
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F12)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (Inches): _____	<b>Hydric Soil Present?</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
	Remarks: _____			

Wetland Hydrology Indicators:									
Primary Indicators (check all that apply)					Secondary Indicators				
<input type="checkbox"/>	Surface Water (A1)	<input type="checkbox"/>	Water Stained Leaves (B9)	<input type="checkbox"/>	Surface Soil Cracks (B6)				
<input type="checkbox"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)	<input type="checkbox"/>	Drainage Patterns (B10)				
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	True Aquatic Plants (B14)	<input type="checkbox"/>	Dry-Season Water Table (C2)				
<input type="checkbox"/>	Water Marks (B1)	<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)	<input type="checkbox"/>	Crayfish Burrows (C8)				
<input type="checkbox"/>	Sediment Deposits (B2)	<input type="checkbox"/>	Oxidized Rhizospheres on Living Roots	<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/>	Drift Deposits (B3)	<input type="checkbox"/>	Presence of Reduced Iron (C4)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)				
<input type="checkbox"/>	Algal Mat or Crust (B4)	<input type="checkbox"/>	Recent Iron Reduction in Tilled Soil (C6)	<input type="checkbox"/>	Geomorphic Position (D2)				
<input type="checkbox"/>	Iron Deposits (B5)	<input type="checkbox"/>	Thin Muck Surface (C7)	<input type="checkbox"/>	FAC-Neutral Test (D5)				
<input type="checkbox"/>	Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/>	Gauge or Well Data (D9)						
<input type="checkbox"/>	Sparsely Vegetated Concave Surface	<input type="checkbox"/>	Other						
<b>Field Observations:</b>									
<input type="checkbox"/>	Surface Water Present?	Yes	No	x	Depth (inches)				
<input type="checkbox"/>	Water Table Present?	Yes	No	x	Depth (inches)				
<input type="checkbox"/>	Saturation Present?	Yes	No	x	Depth (inches)				
<b>Hydrology Indicators Present?</b>									
					<b>Yes      No      x</b>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									



## WETLAND DETERMINATION FORM-MIDWEST REGION

Site: W. Lancaster-S. Baltimore-W. Millersport City/County: Fairfield County Date: 28 March 2024 Data Point: 1  
 Client: AEP State: OH Section, Township, Range: Sec S10, T 14N, R 19W  
 Investigator(s): N. Houk, N. Barnett Landform Terraces Local Relief Convex  
 Slope (%): 1-3 Lat. 39.701956 Long. -82.638831 Datum NAD83 NWI Class: NA  
 Soil Map Unit Name: Thackery silt loam, 0 to 2 percent slopes  
 Climatic/hydrologic conditions typical for time of year? Y/N Y  
 Vegetation N, Soil N or Hydrology N significantly disturbed  
 Vegetation N, Soil N or Hydrology N naturally problematic  
 Are Normal Circumstances Present? Yes x No

## SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the DP within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

## VEGETATION

Tree Stratum	Plot size: 30'	Absolute % Cover	Dominant Species	Indicator Status	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		0	Total Cover		
Shrub Stratum	Plot size: 15'				
1. <i>Robinia pseudoacacia</i>		80	Y	FACU	4
2. <i>Rubus allegheniensis</i>		5	N	FACU	4
3. _____					
4. _____					
5. _____					
		85	Total Cover		
Herb Stratum	Plot size: 5'				
1. <i>Conium maculatum</i>		20	Y	FACW	2
2. <i>Phalaris arundinacea</i>		20	Y	FACW	2
3. <i>Poa pratensis</i>		20	Y	FAC	3
4. <i>Solidago canadensis</i>		20	Y	FACU	4
5. <i>Alliaria petiolata</i>		10	N	FAC	3
6. _____					
7. _____					
8. _____					
		90	Total Cover		
Woody Vine Stratum	Plot size: 30'				
1. _____					
2. _____					
		0	Total Cover		
Remarks:					

Dominance Test Worksheet	
Number of dominant species that are OBL, FACW, or FAC:	3
Total number of dominant species across all strata:	5
Percent of dominant species that are OBL, FACW, or FAC:	60.00
Prevalence Index Worksheet	
Total % cover of:	
OBL species	0 x 1 = 0
FACW species	40 x 2 = 80
FAC species	30 x 3 = 90
FACU species	105 x 4 = 420
UPL species	0 x 5 = 0
Total	175 = 590
Prevalence Index:	3.37

Hydrophytic Vegetation Indicators:	
Rapid Test for Hydrophytic Veg.	
Dominance Test is >50%	x
Prevalence Index is ≤3.0*	
Morphological Adaptations*	
Problematic Hydrophytic Vegetation*	
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
Hydrophytic Vegetation Present?	
Yes	x No

## SOIL

## Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.)

Depth (inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/2	100					Si L	

\*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains \*\*Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		
_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	_____ Indicators for Problematic Hydric Soils
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type: _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (Inches): _____	

## HYDROLOGY

## Wetland Hydrology Indicators:

Primary Indicators (check all that apply)	Secondary Indicators
_____ Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Guage or Well Data (D9)
_____ Sparsely Vegetated Concave Surface	_____ Other
_____ Water Stained Leaves (B9)	
_____ Aquatic Fauna (B13)	
_____ True Aquatic Plants (B14)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soil (C6)	
_____ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Hydrology Indicators Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:	



## Appendix D

*ORAM Forms*





## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	4	
	Metric 3: Hydrology	17	
	Metric 4: Habitat	15.5	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	5	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	43.5	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer “Yes” to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES  Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer “Yes” to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES  Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.</p>
<p>Did you answer “Yes” to</p> <p>Narrative Rating No. 5</p>	<input type="checkbox"/> YES  Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES  Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input type="checkbox"/> NO	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES  Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input type="checkbox"/> Category 1	<input checked="" type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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Site: Lancaster (WL-12N-PEM)	Rater(s): NSB	Date: 3/27/2024
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2	2
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max 6 pts. subtotal

### Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☒ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☐ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

4	6
---	---

max 14 pts. subtotal

### Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
  - ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
  - ☒ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
  - ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
  - ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
  - ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
  - ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

17	23
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Max 30 pts. subtotal

### Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- ☐ High pH groundwater (5pts)
  - ☐ Other groundwater (3pts)
  - ☒ Precipitation (1pts)
  - ☐ Seasonal/Intermittent surface water (3pts)
  - ☐ Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- ☐ 100 year floodplain (1pts)
  - ☐ Between stream/lake and other human use (1pts)
  - ☒ Part of wetland/upland (e.g. forest), complex (1pts)
  - ☐ Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- ☐ >0.7 (27.6in) (3pts)
  - ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
  - ☒ <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- ☐ Semi- to permanently inundated/saturated (4pts)
  - ☒ Regularly inundate/saturated (3pts)
  - ☒ Seasonally inundated (2pts)
  - ☐ Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- ☒ None or none apparent (12pts)
  - ☐ Recovered (7pts)
  - ☐ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input type="checkbox"/> Tile              | <input type="checkbox"/> Filling/grading                |
| <input type="checkbox"/> Dike              | <input type="checkbox"/> Road bed/RR track              |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

15.5	38.5
------	------

Max 20pts. Subtotal

### Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double-check and average.
- ☐ None or none apparent (4pts)
  - ☒ Recovered (3pts)
  - ☐ Recovered (2pts)
  - ☐ Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- ☐ Excellent (7pts)
  - ☐ Very good (6pts)
  - ☒ Good (5pts)
  - ☐ Moderately good (4pts)
  - ☐ Fair (3pts)
  - ☐ Poor to fair (2pts)
  - ☐ Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- ☒ None or none apparent (9pts)
  - ☒ Recovered (6pts)
  - ☐ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input type="checkbox"/> Mowing               | <input type="checkbox"/> Shrub/sapling removal          |
| <input type="checkbox"/> Grazing              | <input type="checkbox"/> Herbaceous/aquatic bed removal |
| <input type="checkbox"/> Clear-cutting        | <input type="checkbox"/> Sedimentation                  |
| <input type="checkbox"/> Selective cutting    | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming             |
| <input type="checkbox"/> Toxic pollutants     | <input type="checkbox"/> Nutrient enrichment            |

38.5

Subtotal this page



38.5

Subtotal first page

0	38.5
Max 10pts	Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

5	43.5
Max 20 pts.	Subtotal

## Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- |   |             |
|---|-------------|
| 0 | Aquatic Bed |
| 2 | Emergent    |
| 0 | Shrub       |
| 0 | Forest      |
| 0 | Mudflats    |
| 0 | Open Water  |
| 0 | Other _____ |

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☐ Moderate (3pts)
- ☐ Moderately low (2pts)
- ☒ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☐ Moderate 25-75% cover (-3pts)
- ☐ Sparse 5-25% cover (-1)
- ☒ Nearly absent >5% cover (0pts)
- ☐ Absent (1pts)

6d. Micro topography

Score all present using 0 to 3 scale.

- |   |                                 |
|---|---------------------------------|
| 2 | Vegetated hummocks/tussocks     |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh  |
| 0 | Amphibian breeding pools        |

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

43.5

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	1
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input checked="" type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	3
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input checked="" type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

6

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.**

		score
3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		1
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input checked="" type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		2
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input checked="" type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b> Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b> Assign a score of 12 since there are no or no apparent modifications.	<b>NOT SURE</b> Double check "none or none apparent" and "recovered" and assign a score of 9.5
			X

<b>Select one or double check adjoining number and average the score.</b>		<b>score</b> 12
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input checked="" type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☒

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

3

**NO** ☐

Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐

Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

3

4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.

☐

3pts RECOVERED. The wetland appears to have recovered from past modifications.

☒

2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications

☐

1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

☐

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

5

7pts EXCELLENT. Wetland appears to represent the best of its type or class.

☐

6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.

☐

5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.

☒

4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.

☐

3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.

☐

2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.

☐

1pt POOR. Wetland appears to not be a good example of its type or class because of past or present disturbances, successional state, etc.

☐

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	X		
<b>Select one or double check adjoining number and average the score.</b>			<b>score</b> 7.5
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.		<input checked="" type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.		<input checked="" type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/		<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.		<input type="checkbox"/>

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

38.5

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a.	<b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	2
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelaspp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		1
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input checked="" type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		0
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input checked="" type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		2
Vegetated hummocks and tussocks.		<input checked="" type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

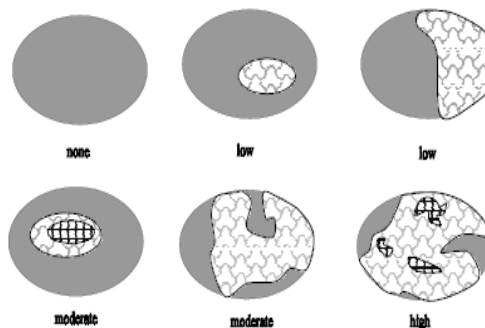


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	1	
	Metric 3: Hydrology	4	
	Metric 4: Habitat	3	
	Metric 5: Special Wetland Communities	-10	
	Metric 6: Plant communities, interspersion, microtopography	3	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	2	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES  Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES  Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.</p>
<p>Did you answer "Yes" to</p> <p>Narrative Rating No. 5</p>	<input checked="" type="checkbox"/> YES  Wetland is categorized as a Category 1 wetland	<input type="checkbox"/> NO	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES  Wetland is assigned to the appropriate category based on the scoring range	<input type="checkbox"/> NO	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input type="checkbox"/> YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="checkbox"/> NO	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES  Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input checked="" type="checkbox"/> <b>Category 1</b>	<input type="checkbox"/> <b>Category 2</b>	<input type="checkbox"/> <b>Category 3</b>
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**End of Ohio Rapid Assessment Method for Wetlands**



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Site: Lancaster (WL-10N-PEM)	Rater(s): NSB	Date: 3/27/2024
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1	1
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max 6 pts.

subtotal

## Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☐ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☒ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

1	2
---	---

max 14 pts.

subtotal

## Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
  - ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
  - ☒ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
  - ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
  - ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
  - ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
  - ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

4	6
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Max 30 pts.

subtotal

## Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- ☐ High pH groundwater (5pts)
  - ☐ Other groundwater (3pts)
  - ☒ Precipitation (1pts)
  - ☐ Seasonal/Intermittent surface water (3pts)
  - ☐ Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- ☐ 100 year floodplain (1pts)
  - ☐ Between stream/lake and other human use (1pts)
  - ☐ Part of wetland/upland (e.g. forest), complex (1pts)
  - ☐ Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- ☐ >0.7 (27.6in) (3pts)
  - ☐ 0.4 to 0.7m (15.7 to 27.6in) 2pts)
  - ☒ <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- ☐ Semi- to permanently inundated/saturated (4pts)
  - ☐ Regularly inundate/saturated (3pts)
  - ☐ Seasonally inundated (2pts)
  - ☒ Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- ☐ None or none apparent (12pts)
  - ☐ Recovered (7pts)
  - ☐ Recovering (3pts)
  - ☒ Recent or no recovery (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input type="checkbox"/> Tile              | <input type="checkbox"/> Filing/grading                 |
| <input type="checkbox"/> Dike              | <input checked="" type="checkbox"/> Road bed/RR track   |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

3	9
---	---

Max 20pts.

Subtotal

## Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double-check and average.
- ☐ None or none apparent (4pts)
  - ☐ Recovered (3pts)
  - ☐ Recovered (2pts)
  - ☒ Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- ☐ Excellent (7pts)
  - ☐ Very good (6pts)
  - ☐ Good (5pts)
  - ☐ Moderately good (4pts)
  - ☐ Fair (3pts)
  - ☐ Poor to fair (2pts)
  - ☒ Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- ☐ None or none apparent (9pts)
  - ☐ Recovered (6pts)
  - ☐ Recovering (3pts)
  - ☒ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Mowing    | <input type="checkbox"/> Shrub/sapling removal          |
| <input type="checkbox"/> Grazing              | <input type="checkbox"/> Herbaceous/aquatic bed removal |
| <input type="checkbox"/> Clear-cutting        | <input type="checkbox"/> Sedimentation                  |
| <input type="checkbox"/> Selective cutting    | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming             |
| <input type="checkbox"/> Toxic pollutants     | <input type="checkbox"/> Nutrient enrichment            |

9

Subtotal this page



9

Subtotal first page

-10	-1
Max 10pts	Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☒ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

3	2
Max 20 pts.	Subtotal

## Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- |   |             |
|---|-------------|
| 0 | Aquatic Bed |
| 1 | Emergent    |
| 0 | Shrub       |
| 0 | Forest      |
| 0 | Mudflats    |
| 0 | Open Water  |
| 0 | Other _____ |

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☐ Moderate (3pts)
- ☐ Moderately low (2pts)
- ☒ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☐ Moderate 25-75% cover (-3pts)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent >5% cover (0pts)
- ☒ Absent (1pts)

6d. Micro topography  
Score all present using 0 to 3 scale.

- |   |                                 |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks     |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh  |
| 0 | Amphibian breeding pools        |

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

2

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	1
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	1
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

2

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		0
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input checked="" type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b> Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b> Assign a score of 12 since there are no or no apparent modifications.	<b>NOT SURE</b> Double check "none or none apparent" and "recovered" and assign a score of 9.5
	X		

Select one or double check adjoining number and average the score.		score
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☒  
Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

**NO** ☐  
Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐  
Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

1

- |      |  |                                     |
|------|--|-------------------------------------|
| 4pts | NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.  | <input type="checkbox"/>            |
| 3pts | RECOVERED. The wetland appears to have recovered from past modifications.  | <input type="checkbox"/>            |
| 2pts | RECOVERING. The wetland appears to be in the process of recovering from past modifications   | <input type="checkbox"/>            |
| 1pt  | RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing. | <input checked="" type="checkbox"/> |

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

1

- |      |  |                                     |
|------|--|-------------------------------------|
| 7pts | EXCELLENT. Wetland appears to represent the best of its type or class.   | <input type="checkbox"/>            |
| 6pts | VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.                          | <input type="checkbox"/>            |
| 5pts | GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent. | <input type="checkbox"/>            |
| 4pts | MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.  | <input type="checkbox"/>            |
| 3pts | FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.        | <input type="checkbox"/>            |
| 2pts | POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.   | <input type="checkbox"/>            |
| 1pt  | POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.                         | <input checked="" type="checkbox"/> |

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	X		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b>
			1
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input checked="" type="checkbox"/>	

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a. <b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.		1
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelaspp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	1
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

0

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		1
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input checked="" type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input checked="" type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

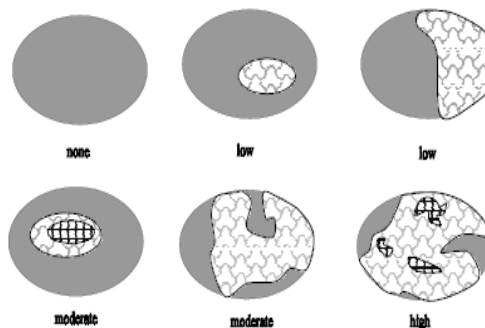


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	2	
	Metric 3: Hydrology	16	
	Metric 4: Habitat	7	
	Metric 5: Special Wetland Communities	-10	
	Metric 6: Plant communities, interspersion, microtopography	2	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	18	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one	Evaluation
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 3 wetland</p>	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland should be evaluated for possible Category 3 status</p>	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.</p>
<p>Did you answer "Yes" to</p> <p>Narrative Rating No. 5</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 1 wetland</p>	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the appropriate category based on the scoring range</p>	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria</p>	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form</p>	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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Site: West Lancaster - WL-5-PEM	Rater(s): E. Holt, L. Vine	Date: 3/27/24
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1	1
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max 6 pts.

subtotal

## Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☐ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☒ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

1	2
---	---

max 14 pts.

subtotal

## Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
- ☐ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
- ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
- ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

6	8
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Max 30 pts.

subtotal

## Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

- ☐ High pH groundwater (5pts)
- ☐ Other groundwater (3pts)
- ☐ Precipitation (1pts)
- ☐ Seasonal/Intermittent surface water (3pts)
- ☐ Perennial surface water (lake or stream) (5pts)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3pts)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
- ☒ <0.4m (<15.7in) (1pts)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12pts)
- ☐ Recovered (7pts)
- ☒ Recovering (3pts)
- ☐ Recent or no recovery (1pts)

3b. Connectivity. Score all that apply

- ☐ 100 year floodplain (1pts)
- ☐ Between stream/lake and other human use (1pts)
- ☐ Part of wetland/upland (e.g. forest), complex (1pts)
- ☐ Part of riparian or upland corridor (1pts)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4pts)
- ☐ Regularly inundate/saturated (3pts)
- ☒ Seasonally inundated (2pts)
- ☐ Seasonally saturated in upper 30cm (12in) (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input type="checkbox"/> Tile              | <input type="checkbox"/> Filling/grading                |
| <input type="checkbox"/> Dike              | <input type="checkbox"/> Road bed/RR track              |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

9	17
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Max 20pts.

Subtotal

## Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double-check and average.

- ☐ None or none apparent (4pts)
- ☒ Recovered (3pts)
- ☐ Recovered (2pts)
- ☐ Recent or no recovery (1pts)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7pts)
- ☐ Very good (6pts)
- ☐ Good (5pts)
- ☐ Moderately good (4pts)
- ☒ Fair (3pts)
- ☐ Poor to fair (2pts)
- ☐ Poor (pts)

4c. Habitat alteration. Score one or double-check and average.

- ☐ None or none apparent (9pts)
- ☐ Recovered (6pts)
- ☒ Recovering (3pts)
- ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Mowing        | <input type="checkbox"/> Shrub/sapling removal          |
| <input type="checkbox"/> Grazing                  | <input type="checkbox"/> Herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation                  |
| <input type="checkbox"/> Selective cutting        | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Woody debris removal     | <input checked="" type="checkbox"/> Farming             |
| <input type="checkbox"/> Toxic pollutants         | <input type="checkbox"/> Nutrient enrichment            |

17

Subtotal this page



17

Subtotal first page

-10

7

Max 10pts

Subtotal

**Metric 5. Special wetlands.**

Check all that apply and score as indicated

- ☐ Bog (10pts)  
☐ Fen (10pts)  
☐ Old growth forest (10pts)  
☐ Mature forested wetland (5 pts)  
☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)  
☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)  
☐ Lake Plain Sand Prairies (Oak Openings) (10pts)  
☐ Relict Wet Prairies (10pts)  
☐ Known occurrence state/federal threatened or endangered species (10pts)  
☐ Significant migratory songbird/water fowl habitat or usage (10pts)  
☒ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

14

21

Max 20 pts.

Subtotal

**Metric 6. Plant communities, interspersions, micro topography..**

6a. Wetland Vegetation Communities  
 Score all present using 0 to 3 scale.

- ☐ 0 Aquatic Bed  
☐ 3 Emergent  
☐ 1 Shrub  
☐ 0 Forest  
☐ 0 Mudflats  
☐ 0 Open Water  
☐ Other \_\_\_\_\_

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)  
☒ Moderately high (4pts)  
☐ Moderate (3pts)  
☐ Moderately low (2pts)  
☐ Low (1pts)  
☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
 Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)  
☐ Moderate 25-75% cover (-3pts)  
☐ Sparse 5-25% cover (-1)  
☒ Nearly absent >5% cover (0pts)  
☐ Absent (1pts)

6d. Micro topography  
 Score all present using 0 to 3 scale.

- ☐ 0 Vegetated hummocks/tussocks  
☐ 1 Coarse woody debris >15cm (6in)  
☐ 0 Standing dead >25cm (10in) dbh  
☐ 0 Amphibian breeding pools

**Vegetation Community Cover Scale**

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

**Narrative Description of Vegetation Quality**

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

**Mudflat and Open Water Class Quality**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

**Micro topography Cover Scale**

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

21

**GRAND TOTAL (max 100 pts)**



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

**score**

6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	2
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

**score**

<b>2a. Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.		
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
<b>2b. Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).		
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

3

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		1
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		2
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input checked="" type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

12

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b> Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b> Assign a score of 12 since there are no or no apparent modifications.  12	<b>NOT SURE</b> Double check "none or none apparent" and "recovered" and assign a score of 9.5
---	---	--	---

Select one or double check adjoining number and average the score.			score 3
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>	
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input checked="" type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>	

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

2

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☒

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

2

**NO** ☐

Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐

Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

2

4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.

☐

3pts RECOVERED. The wetland appears to have recovered from past modifications.

☐

2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications

☒

1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

☐

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

3

7pts EXCELLENT. Wetland appears to represent the best of its type or class.

☐

6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.

☐

5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.

☐

4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.

☐

3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.

☒

2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.

☐

1pt POOR. Wetland appears to not be a good example of its type or class because of past or present disturbances, successional state, etc.

☐

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	3		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b>
			3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>	

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a.	<b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	4
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelasp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	3
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	1
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	0

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		3
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input checked="" type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		0
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input checked="" type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

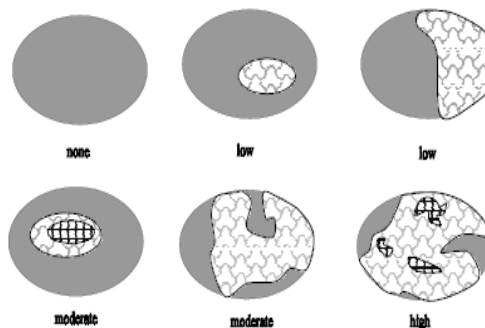


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	1	
	Metric 3: Hydrology	10	
	Metric 4: Habitat	7	
	Metric 5: Special Wetland Communities	-10	
	Metric 6: Plant communities, interspersion, microtopography	4	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	13	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one	Evaluation
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> YES</div> <div><input checked="" type="checkbox"/> NO</div> </div> <p>Wetland is categorized as a Category 3 wetland</p>	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> YES</div> <div><input checked="" type="checkbox"/> NO</div> </div> <p>Wetland should be evaluated for possible Category 3 status</p>	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.</p>
<p>Did you answer "Yes" to</p> <p>Narrative Rating No. 5</p>	<div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> YES</div> <div><input checked="" type="checkbox"/> NO</div> </div> <p>Wetland is categorized as a Category 1 wetland</p>	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> YES</div> <div><input checked="" type="checkbox"/> NO</div> </div> <p>Wetland is assigned to the appropriate category based on the scoring range</p>	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> YES</div> <div><input checked="" type="checkbox"/> NO</div> </div> <p>Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria</p>	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> YES</div> <div><input checked="" type="checkbox"/> NO</div> </div> <p>Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form</p>	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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1	1
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max 6 pts.

subtotal

## Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☐ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☒ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

3	4
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max 14 pts.

subtotal

## Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
- ☐ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
- ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

18	22
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Max 30 pts.

subtotal

## Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

- ☐ High pH groundwater (5pts)
- ☒ Other groundwater (3pts)
- ☒ Precipitation (1pts)
- ☐ Seasonal/Intermittent surface water (3pts)
- ☐ Perennial surface water (lake or stream) (5pts)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3pts)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
- ☒ <0.4m (<15.7in) (1pts)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☒ None or none apparent (12pts)
- ☐ Recovered (7pts)
- ☐ Recovering (3pts)
- ☐ Recent or no recovery (1pts)

3b. Connectivity. Score all that apply

- ☐ 100 year floodplain (1pts)
- ☒ Between stream/lake and other human use (1pts)
- ☐ Part of wetland/upland (e.g. forest), complex (1pts)
- ☐ Part of riparian or upland corridor (1pts)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4pts)
- ☐ Regularly inundate/saturated (3pts)
- ☐ Seasonally inundated (2pts)
- ☐ Seasonally saturated in upper 30cm (12in) (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input type="checkbox"/> Tile              | <input type="checkbox"/> Filling/grading                |
| <input type="checkbox"/> Dike              | <input type="checkbox"/> Road bed/RR track              |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

10	32
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Max 20pts.

Subtotal

## Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double-check and average.

- ☐ None or none apparent (4pts)
- ☒ Recovered (3pts)
- ☐ Recovered (2pts)
- ☐ Recent or no recovery (1pts)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7pts)
- ☐ Very good (6pts)
- ☐ Good (5pts)
- ☒ Moderately good (4pts)
- ☐ Fair (3pts)
- ☐ Poor to fair (2pts)
- ☐ Poor (pts)

4c. Habitat alteration. Score one or double-check and average.

- ☐ None or none apparent (9pts)
- ☐ Recovered (6pts)
- ☒ Recovering (3pts)
- ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Mowing            | <input type="checkbox"/> Shrub/sapling removal          |
| <input type="checkbox"/> Grazing                      | <input type="checkbox"/> Herbaceous/aquatic bed removal |
| <input checked="" type="checkbox"/> Clear-cutting     | <input type="checkbox"/> Sedimentation                  |
| <input checked="" type="checkbox"/> Selective cutting | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Woody debris removal         | <input type="checkbox"/> Farming                        |
| <input type="checkbox"/> Toxic pollutants             | <input type="checkbox"/> Nutrient enrichment            |

32

Subtotal this page



32

Subtotal first page

-10

22

Max 10pts

Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☒ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

3

25

Max 20 pts.

Subtotal

## Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- 0

 Aquatic Bed
- 2

 Emergent
- 0

 Shrub
- 0

 Forest
- 0

 Mudflats
- 0

 Open Water
- Other \_\_\_\_\_

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☐ Moderate (3pts)
- ☒ Moderately low (2pts)
- ☐ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☐ Moderate 25-75% cover (-3pts)
- ☒ Sparse 5-25% cover (-1)
- ☐ Nearly absent >5% cover (0pts)
- ☐ Absent (1pts)

6d. Micro topography  
Score all present using 0 to 3 scale.

- 0

 Vegetated hummocks/tussocks
- 0

 Coarse woody debris >15cm (6in)
- 0

 Standing dead >25cm (10in) dbh
- 0

 Amphibian breeding pools

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance Tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

25

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	1
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	3
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input checked="" type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input type="checkbox"/>

4

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.**

score

3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		4
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input checked="" type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		1
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

12

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filing/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

**Circle one answer.** Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?

**YES**

Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.

**NO**

Assign a score of 12 since there are no or no apparent modifications.

12

**NOT SURE**

Double check "none or none apparent" and "recovered" and assign a score of 9.5

Select one or double check adjoining number and average the score.

**score**  
1

12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

2

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☐

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

2

**NO** ☐

Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐

Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

2

- |      |  |                                     |
|------|--|-------------------------------------|
| 4pts | NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.  | <input type="checkbox"/>            |
| 3pts | RECOVERED. The wetland appears to have recovered from past modifications.  | <input type="checkbox"/>            |
| 2pts | RECOVERING. The wetland appears to be in the process of recovering from past modifications   | <input checked="" type="checkbox"/> |
| 1pt  | RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing. | <input type="checkbox"/>            |

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

3

- |      |  |                                     |
|------|--|-------------------------------------|
| 7pts | EXCELLENT. Wetland appears to represent the best of its type or class.   | <input type="checkbox"/>            |
| 6pts | VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.                          | <input type="checkbox"/>            |
| 5pts | GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent. | <input type="checkbox"/>            |
| 4pts | MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.  | <input type="checkbox"/>            |
| 3pts | FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.        | <input checked="" type="checkbox"/> |
| 2pts | POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.   | <input type="checkbox"/>            |
| 1pt  | POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.                         | <input type="checkbox"/>            |

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input checked="" type="checkbox"/>	Selective cutting	<input type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	3		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b> 3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>	

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a. <b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.		2
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelaspp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		3
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input checked="" type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		-1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input checked="" type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

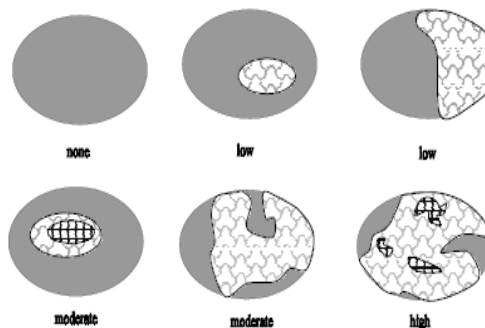


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	3	
	Metric 3: Hydrology	10	
	Metric 4: Habitat	6	
	Metric 5: Special Wetland Communities	-9	
	Metric 6: Plant communities, interspersion, microtopography	7	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	19	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one	Evaluation
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 3 wetland</p>	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland should be evaluated for possible Category 3 status</p>	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.</p>
<p>Did you answer "Yes" to</p> <p>Narrative Rating No. 5</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 1 wetland</p>	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the appropriate category based on the scoring range</p>	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria</p>	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form</p>	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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2	2
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max 6 pts.      subtotal

### Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☒ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☐ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

4	6
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max 14 pts.      subtotal

### Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
  - ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
  - ☒ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
  - ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
  - ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
  - ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
  - ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

13	19
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Max 30 pts.      subtotal

### Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- ☐ High pH groundwater (5pts)
  - ☐ Other groundwater (3pts)
  - ☐ Precipitation (1pts)
  - ☐ Seasonal/Intermittent surface water (3pts)
  - ☐ Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- ☐ 100 year floodplain (1pts)
  - ☒ Between stream/lake and other human use (1pts)
  - ☒ Part of wetland/upland (e.g. forest), complex (1pts)
  - ☐ Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- ☐ >0.7 (27.6in) (3pts)
  - ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
  - ☒ <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- ☐ Semi- to permanently inundated/saturated (4pts)
  - ☒ Regularly inundate/saturated (3pts)
  - ☐ Seasonally inundated (2pts)
  - ☐ Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- ☐ None or none apparent (12pts)
  - ☒ Recovered (7pts)
  - ☐ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

<input type="checkbox"/> Ditch <input type="checkbox"/> Tile <input type="checkbox"/> Dike <input type="checkbox"/> Weir <input type="checkbox"/> Storm water input	<input type="checkbox"/> Point source (non-storm water) <input type="checkbox"/> Filling/grading <input type="checkbox"/> Road bed/RR track <input type="checkbox"/> Dredging <input type="checkbox"/> Other
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10	29
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Max 20pts.      Subtotal

### Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double-check and average.
- ☐ None or none apparent (4pts)
  - ☒ Recovered (3pts)
  - ☐ Recovered (2pts)
  - ☐ Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- ☐ Excellent (7pts)
  - ☐ Very good (6pts)
  - ☐ Good (5pts)
  - ☒ Moderately good (4pts)
  - ☐ Fair (3pts)
  - ☐ Poor to fair (2pts)
  - ☐ Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- ☐ None or none apparent (9pts)
  - ☐ Recovered (6pts)
  - ☒ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

<input checked="" type="checkbox"/> Mowing <input type="checkbox"/> Grazing <input checked="" type="checkbox"/> Clear-cutting <input checked="" type="checkbox"/> Selective cutting <input type="checkbox"/> Woody debris removal <input type="checkbox"/> Toxic pollutants	<input type="checkbox"/> Shrub/sapling removal <input type="checkbox"/> Herbaceous/aquatic bed removal <input type="checkbox"/> Sedimentation <input type="checkbox"/> Dredging <input type="checkbox"/> Farming <input type="checkbox"/> Nutrient enrichment
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29

Subtotal this page



29

Subtotal first page

-10

19

Max 10pts

Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☒ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

4

23

Max 20 pts.

Subtotal

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- |   |             |
|---|-------------|
| 0 | Aquatic Bed |
| 3 | Emergent    |
| 1 | Shrub       |
| 0 | Forest      |
| 0 | Mudflats    |
| 0 | Open Water  |
|   | Other _____ |

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☐ Moderate (3pts)
- ☒ Moderately low (2pts)
- ☐ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☐ Moderate 25-75% cover (-3pts)
- ☒ Sparse 5-25% cover (-1)
- ☐ Nearly absent >5% cover (0pts)
- ☐ Absent (1pts)

6d. Micro topography  
Score all present using 0 to 3 scale.

- |   |                                 |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks     |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh  |
| 0 | Amphibian breeding pools        |

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance Tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

23

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	1
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input checked="" type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	3
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input checked="" type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input type="checkbox"/>

6

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.**

score

3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		4
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input checked="" type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		1
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "squarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		2
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input checked="" type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

12

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

**Circle one answer.** Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?

**YES**

Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.

**NO**

Assign a score of 12 since there are no or no apparent modifications.

12

**NOT SURE**

Double check "none or none apparent" and "recovered" and assign a score of 9.5

Select one or double check adjoining number and average the score.

**score**

12

12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input checked="" type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

1

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☒

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

1

**NO** ☐

Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐

Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

3

4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.

☐

3pts RECOVERED. The wetland appears to have recovered from past modifications.

☒

2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications

☐

1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

☐

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

4

7pts EXCELLENT. Wetland appears to represent the best of its type or class.

☐

6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.

☐

5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.

☐

4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.

☒

3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.

☐

2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.

☐

1pt POOR. Wetland appears to not be a good example of its type or class because of past or present disturbances, successional state, etc.

☐

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input checked="" type="checkbox"/>	Selective cutting	<input type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	3		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b> 3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>	

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a. <b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.		2
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelaspp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		2
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input checked="" type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		-1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input checked="" type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

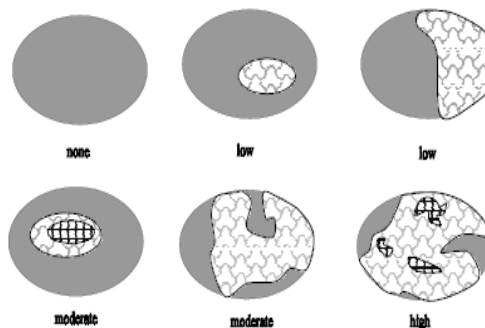


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	1	
	Metric 3: Hydrology	18	
	Metric 4: Habitat	9	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	3	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	32	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one	Evaluation
<p>Did you answer “Yes” to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 3 wetland</p>	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer “Yes” to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland should be evaluated for possible Category 3 status</p>	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland’s category.</p>
<p>Did you answer “Yes” to</p> <p>Narrative Rating No. 5</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 1 wetland</p>	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the appropriate category based on the scoring range</p>	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the “gray zone” for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input checked="" type="checkbox"/> YES</span> <span><input type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria</p>	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form</p>	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland’s biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input type="checkbox"/> Category 1	<input checked="" type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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Site: Lancaster - WL-50-PEM	Rater(s): NSB	Date: 3/27/2024
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1	1
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max 6 pts.

subtotal

## Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☐ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☒ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

1	2
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max 14 pts.

subtotal

## Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
  - ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
  - ☐ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
  - ☒ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
  - ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
  - ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
  - ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

18	20
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Max 30 pts.

subtotal

## Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- ☐ High pH groundwater (5pts)
  - ☒ Other groundwater (3pts)
  - ☒ Precipitation (1pts)
  - ☐ Seasonal/Intermittent surface water (3pts)
  - ☐ Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- ☐ 100 year floodplain (1pts)
  - ☐ Between stream/lake and other human use (1pts)
  - ☐ Part of wetland/upland (e.g. forest), complex (1pts)
  - ☐ Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- ☐ >0.7 (27.6in) (3pts)
  - ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
  - ☒ <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- ☐ Semi- to permanently inundated/saturated (4pts)
  - ☐ Regularly inundate/saturated (3pts)
  - ☐ Seasonally inundated (2pts)
  - ☒ Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- ☒ None or none apparent (12pts)
  - ☐ Recovered (7pts)
  - ☐ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input type="checkbox"/> Tile              | <input type="checkbox"/> Filling/grading                |
| <input type="checkbox"/> Dike              | <input type="checkbox"/> Road bed/RR track              |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

9	29
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Max 20pts.

Subtotal

## Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double-check and average.
- ☒ None or none apparent (4pts)
  - ☐ Recovered (3pts)
  - ☐ Recovered (2pts)
  - ☐ Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- ☐ Excellent (7pts)
  - ☐ Very good (6pts)
  - ☐ Good (5pts)
  - ☒ Moderately good (4pts)
  - ☐ Fair (3pts)
  - ☐ Poor to fair (2pts)
  - ☐ Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- ☐ None or none apparent (9pts)
  - ☐ Recovered (6pts)
  - ☐ Recovering (3pts)
  - ☒ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input type="checkbox"/> Mowing               | <input type="checkbox"/> Shrub/sapling removal          |
| <input type="checkbox"/> Grazing              | <input type="checkbox"/> Herbaceous/aquatic bed removal |
| <input type="checkbox"/> Clear-cutting        | <input type="checkbox"/> Sedimentation                  |
| <input type="checkbox"/> Selective cutting    | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Woody debris removal | <input checked="" type="checkbox"/> Farming             |
| <input type="checkbox"/> Toxic pollutants     | <input type="checkbox"/> Nutrient enrichment            |

29

Subtotal this page



29

Subtotal first page

0

29

Max 10pts

Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

3

32

Max 20 pts.

Subtotal

## Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- |   |             |
|---|-------------|
| 0 | Aquatic Bed |
| 1 | Emergent    |
| 0 | Shrub       |
| 0 | Forest      |
| 0 | Mudflats    |
| 0 | Open Water  |
| 0 | Other _____ |

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☐ Moderate (3pts)
- ☐ Moderately low (2pts)
- ☒ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☐ Moderate 25-75% cover (-3pts)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent >5% cover (0pts)
- ☒ Absent (1pts)

6d. Micro topography  
Score all present using 0 to 3 scale.

- |   |                                 |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks     |
| 0 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh  |
| 0 | Amphibian breeding pools        |

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance Tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

32

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	1
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	1
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

2

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.**

		score
3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		4
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input checked="" type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		0
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filing/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b> Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b> Assign a score of 12 since there are no or no apparent modifications.	<b>NOT SURE</b> Double check "none or none apparent" and "recovered" and assign a score of 9.5
			X

Select one or double check adjoining number and average the score.		score
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input checked="" type="checkbox"/>
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☐

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

**NO** ☒

Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐

Double check "none or none apparent" and "recovered" and assign a score of 3.5

4

Select one or double check adjoining number and average the score.

score

4

4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.

☒

3pts RECOVERED. The wetland appears to have recovered from past modifications.

☐

2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications

☐

1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

☐

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

4

7pts EXCELLENT. Wetland appears to represent the best of its type or class.

☐

6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.

☐

5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.

☐

4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.

☐

3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.

☐

2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.

☐

1pt POOR. Wetland appears to not be a good example of its type or class because of past or present disturbances, successional state, etc.

☐

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	1		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b>
			1
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input checked="" type="checkbox"/>	

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a. <b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.		1
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelaspp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	1
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		1
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input checked="" type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input checked="" type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		0
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

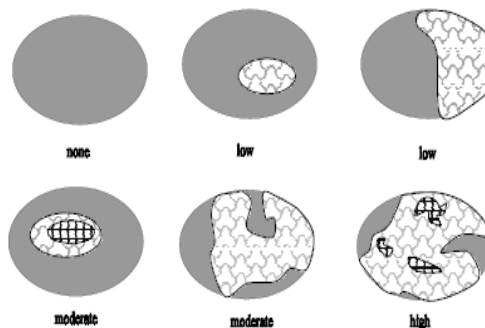


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	1	
	Metric 2: Buffers and surrounding land use	3	
	Metric 3: Hydrology	15	
	Metric 4: Habitat	11	
	Metric 5: Special Wetland Communities	-9	
	Metric 6: Plant communities, interspersion, microtopography	11	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	33	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one	Evaluation
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 3 wetland</p>	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland should be evaluated for possible Category 3 status</p>	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.</p>
<p>Did you answer "Yes" to</p> <p>Narrative Rating No. 5</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is categorized as a Category 1 wetland</p>	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the appropriate category based on the scoring range</p>	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<div style="display: flex; justify-content: space-between;"> <span><input checked="" type="checkbox"/> YES</span> <span><input type="checkbox"/> NO</span> </div> <p>Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria</p>	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> YES</span> <span><input checked="" type="checkbox"/> NO</span> </div> <p>Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form</p>	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input checked="" type="checkbox"/> Category 1	<input type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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Site: West Lancaster - WL-41-PEM	Rater(s): E. Holt	Date: 3/27/24
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2	2
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max 6 pts.

subtotal

## Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☒ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☐ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

2	4
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max 14 pts.

subtotal

## Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
  - ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
  - ☒ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
  - ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
  - ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
  - ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
  - ☒ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

9	13
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Max 30 pts.

subtotal

## Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- ☐ High pH groundwater (5pts)
  - ☐ Other groundwater (3pts)
  - ☐ Precipitation (1pts)
  - ☒ Seasonal/Intermittent surface water (3pts)
  - ☐ Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- ☐ 100 year floodplain (1pts)
  - ☐ Between stream/lake and other human use (1pts)
  - ☒ Part of wetland/upland (e.g. forest), complex (1pts)
  - ☐ Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- ☐ >0.7 (27.6in) (3pts)
  - ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
  - ☒ <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- ☐ Semi- to permanently inundated/saturated (4pts)
  - ☐ Regularly inundate/saturated (3pts)
  - ☐ Seasonally inundated (2pts)
  - ☒ Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- ☐ None or none apparent (12pts)
  - ☐ Recovered (7pts)
  - ☒ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input checked="" type="checkbox"/> Tile   | <input type="checkbox"/> Filing/grading                 |
| <input type="checkbox"/> Dike              | <input type="checkbox"/> Road bed/RR track              |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

8	21
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Max 20pts.

Subtotal

## Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double-check and average.
- ☐ None or none apparent (4pts)
  - ☐ Recovered (3pts)
  - ☒ Recovered (2pts)
  - ☐ Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- ☐ Excellent (7pts)
  - ☐ Very good (6pts)
  - ☐ Good (5pts)
  - ☐ Moderately good (4pts)
  - ☒ Fair (3pts)
  - ☐ Poor to fair (2pts)
  - ☐ Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- ☐ None or none apparent (9pts)
  - ☐ Recovered (6pts)
  - ☒ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Mowing        | <input checked="" type="checkbox"/> Shrub/sapling removal |
| <input type="checkbox"/> Grazing                  | <input type="checkbox"/> Herbaceous/aquatic bed removal   |
| <input checked="" type="checkbox"/> Clear-cutting | <input type="checkbox"/> Sedimentation                    |
| <input type="checkbox"/> Selective cutting        | <input type="checkbox"/> Dredging                         |
| <input type="checkbox"/> Woody debris removal     | <input checked="" type="checkbox"/> Farming               |
| <input type="checkbox"/> Toxic pollutants         | <input type="checkbox"/> Nutrient enrichment              |

21

Subtotal this page



21

Subtotal first page

-10

11

Max 10pts

Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☒ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

7

18

Max 20 pts.

Subtotal

## Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- |   |             |
|---|-------------|
| 0 | Aquatic Bed |
| 3 | Emergent    |
| 1 | Shrub       |
| 0 | Forest      |
| 0 | Mudflats    |
| 0 | Open Water  |
|   | Other _____ |

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☒ Moderate (3pts)
- ☐ Moderately low (2pts)
- ☐ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☐ Moderate 25-75% cover (-3pts)
- ☒ Sparse 5-25% cover (-1)
- ☐ Nearly absent >5% cover (0pts)
- ☐ Absent (1pts)

6d. Micro topography  
Score all present using 0 to 3 scale.

- |   |                                 |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks     |
| 1 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh  |
| 0 | Amphibian breeding pools        |

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance Tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

18

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	0
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input checked="" type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	1
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input checked="" type="checkbox"/>

3

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity. A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.**

		score
3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		1
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input checked="" type="checkbox"/>	point source discharges to the (non-storm water)
<input checked="" type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filing/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 12 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 9.5
	1		

Select one or double check adjoining number and average the score.			score
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>	7
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>	

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

3.5

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

YES ☐

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

NO ☐

Assign a score of 4 since there are no or no apparent modifications.

NOT SURE ☒

Double check "none or none apparent" and "recovered" and assign a score of 3.5

3.5

Select one or double check adjoining number and average the score.

score

3

- |      |  |                                     |
|------|--|-------------------------------------|
| 4pts | NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.  | <input type="checkbox"/>            |
| 3pts | RECOVERED. The wetland appears to have recovered from past modifications.  | <input checked="" type="checkbox"/> |
| 2pts | RECOVERING. The wetland appears to be in the process of recovering from past modifications   | <input type="checkbox"/>            |
| 1pt  | RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing. | <input type="checkbox"/>            |

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

- |      |  |                                     |
|------|--|-------------------------------------|
| 7pts | EXCELLENT. Wetland appears to represent the best of its type or class.   | <input type="checkbox"/>            |
| 6pts | VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.                          | <input type="checkbox"/>            |
| 5pts | GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent. | <input type="checkbox"/>            |
| 4pts | MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.  | <input checked="" type="checkbox"/> |
| 3pts | FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.        | <input type="checkbox"/>            |
| 2pts | POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.   | <input type="checkbox"/>            |
| 1pt  | POOR. Wetland appears to <u>not</u> be a good example of its type or class because of past or present disturbances, successional state, etc.                         | <input type="checkbox"/>            |

25.5

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

3

Check all that are observed present in or near the wetland

<input checked="" type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input checked="" type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input checked="" type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	3		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b>
			3
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.	<input type="checkbox"/>	
6pts	RECOVERED. The wetland appears to have recovered from past alterations.	<input type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/	<input checked="" type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.	<input type="checkbox"/>	

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input checked="" type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a.	<b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	4
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelasp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	2
<input checked="" type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	1
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	0

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		2
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input checked="" type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		-.1
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input checked="" type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		1
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input checked="" type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

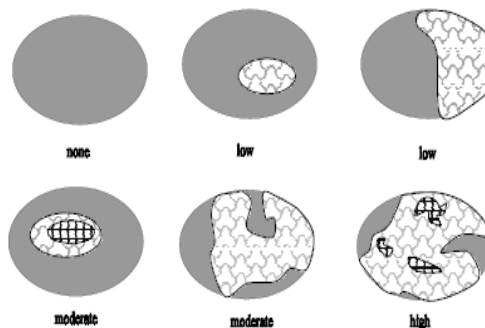


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## ORAM Summary Worksheet

		Circle answer or insert <b>score</b>	<b>Result</b>
<b>Narrative Rating</b>	Question 1: Critical Habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 2: Threatened or Engagered Species	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 3: High Quality Natural Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 4: Significant bird habitat	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 5: Category 1 Wetlands	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 1
	Questions 6: Bogs	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 7: Fens	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 8a: Old Growth Forest	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Question 8b: Mature Forested Wetland	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9b: Lake Erie Wetlands – Restricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Questions 9d: Lake Erie Wetlands - Unrestricted	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Questions 9e: Lake Erie Wetlands – Unrestricted with invasive plants	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10: Oak Openings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, Category 3.
	Quest 11: Relict Wet Prairies	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
<b>Quantitative Rating</b>	Metric 1: Size	2	
	Metric 2: Buffers and surrounding land use	9	
	Metric 3: Hydrology	13	
	Metric 4: Habitat	15	
	Metric 5: Special Wetland Communities	0	
	Metric 6: Plant communities, interspersion, microtopography	1	
	TOTAL SCORE  Consult most recent score calibration report at <a href="http://www.epa.state.oh.us/dsw/401/401.html">http://www.epa.state.oh.us/dsw/401/401.html</a> to determine the wetland's category based on its quantitative score	40	Category based on score breakpoints

## Complete Wetland Categorization Worksheet



## Wetland Categorization Worksheet

Choices	Circle one		Evaluation
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10.</p>	<input type="checkbox"/> YES  Wetland is categorized as a Category 3 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM</p>
<p>Did you answer "Yes" to any of the following questions:</p> <p>Narrative Rating Nos. 1, 8b, 9b, 9e, 11</p>	<input type="checkbox"/> YES  Wetland should be evaluated for possible Category 3 status	<input checked="" type="checkbox"/> NO	<p>Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and or functional assessments may also be used to determine the wetland's category.</p>
<p>Did you answer "Yes" to</p> <p>Narrative Rating No. 5</p>	<input type="checkbox"/> YES  Wetland is categorized as a Category 1 wetland	<input checked="" type="checkbox"/> NO	<p>Is quantitative rating score greater than the Category 2 scoring threshold (including any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM</p>
<p>Does the quantitative score fall within the scoring range of a Category 1, 2 or 3 wetlands?</p>	<input type="checkbox"/> YES  Wetland is assigned to the appropriate category based on the scoring range	<input checked="" type="checkbox"/> NO	<p>If the score of the wetland is located within the scoring range for a particular category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.</p>
<p>Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?</p>	<input checked="" type="checkbox"/> YES  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input type="checkbox"/> NO	<p>Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).</p>
<p>Does the wetland otherwise exhibit moderate or superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?</p>	<input type="checkbox"/> YES  Wetland was under categorized by this method. A written justification for re-categorization should be provided on Background Information Form	<input checked="" type="checkbox"/> NO	<p>A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria, in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.</p>

### Final Category

Choose One	<input type="checkbox"/> Category 1	<input checked="" type="checkbox"/> Category 2	<input type="checkbox"/> Category 3
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**End of Ohio Rapid Assessment Method for Wetlands**



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Site: Lancaster (WL-18S-PEM)	Rater(s): NSB	Date: 3/28/2024
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2	2
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max 6 pts. subtotal

## Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6pts)
- ☐ 25 to <50acrea (10.1 to <20.2ha) (5pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3pts)
- ☒ 0.3 to <3 acres (0.12 to 1.2ha) (2pts)
- ☐ .1 to <0.3acres (0.04 to <0.12ha) (1pts)
- ☐ <0.1 acres (0.04ha) (0pts)

9	11
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max 14 pts. subtotal

## Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ WIDE. Buffers average 50 m (164ft) or more around wetland perimeter (7pts)
  - ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4pts)
  - ☐ NARROW. Buffers average 10m to <25m (32ft < 82ft) around wetland perimeter (1pts)
  - ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Calculate average buffer width. Select only one and assign score. Do not double check.
- ☐ VERY LOW. 2<sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc. (7pts)
  - ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5pts)
  - ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3pts)
  - ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1pts)

13	24
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Max 30 pts. subtotal

## Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- ☐ High pH groundwater (5pts)
  - ☐ Other groundwater (3pts)
  - ☒ Precipitation (1pts)
  - ☐ Seasonal/Intermittent surface water (3pts)
  - ☐ Perennial surface water (lake or stream) (5pts)
- 3b. Connectivity. Score all that apply
- ☐ 100 year floodplain (1pts)
  - ☒ Between stream/lake and other human use (1pts)
  - ☒ Part of wetland/upland (e.g. forest), complex (1pts)
  - ☒ Part of riparian or upland corridor (1pts)
- 3c. Maximum water depth. Select only one and assign score.
- ☐ >0.7 (27.6in) (3pts)
  - ☐ 0.4 to 0.7m (15.7 to 27.6in) (2pts)
  - ☒ <0.4m (<15.7in) (1pts)
- 3d. Duration inundation/saturation. Score one or dbl check.
- ☐ Semi- to permanently inundated/saturated (4pts)
  - ☐ Regularly inundate/saturated (3pts)
  - ☐ Seasonally inundated (2pts)
  - ☒ Seasonally saturated in upper 30cm (12in) (1pts)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- ☐ None or none apparent (12pts)
  - ☒ Recovered (7pts)
  - ☐ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |  |   |
|--|---|
| <input type="checkbox"/> Ditch             | <input type="checkbox"/> Point source (non-storm water) |
| <input type="checkbox"/> Tile              | <input type="checkbox"/> Filing/grading                 |
| <input type="checkbox"/> Dike              | <input checked="" type="checkbox"/> Road bed/RR track   |
| <input type="checkbox"/> Weir              | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Storm water input | <input type="checkbox"/> Other                          |

15	39
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Max 20pts. Subtotal

## Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double-check and average.
- ☐ None or none apparent (4pts)
  - ☒ Recovered (3pts)
  - ☐ Recovered (2pts)
  - ☐ Recent or no recovery (1pts)
- 4b. Habitat development. Select only one and assign score.
- ☐ Excellent (7pts)
  - ☐ Very good (6pts)
  - ☐ Good (5pts)
  - ☐ Moderately good (4pts)
  - ☒ Fair (3pts)
  - ☐ Poor to fair (2pts)
  - ☐ Poor (pts)
- 4c. Habitat alteration. Score one or double-check and average.
- ☒ None or none apparent (9pts)
  - ☐ Recovered (6pts)
  - ☐ Recovering (3pts)
  - ☐ Recent or no recovery (1pts)

Check all disturbances observed

- |   |   |
|---|---|
| <input type="checkbox"/> Mowing               | <input type="checkbox"/> Shrub/sapling removal          |
| <input type="checkbox"/> Grazing              | <input type="checkbox"/> Herbaceous/aquatic bed removal |
| <input type="checkbox"/> Clear-cutting        | <input type="checkbox"/> Sedimentation                  |
| <input type="checkbox"/> Selective cutting    | <input type="checkbox"/> Dredging                       |
| <input type="checkbox"/> Woody debris removal | <input type="checkbox"/> Farming                        |
| <input type="checkbox"/> Toxic pollutants     | <input type="checkbox"/> Nutrient enrichment            |

39

Subtotal this page



39

Subtotal first page

0

39

Max 10pts

Subtotal

## Metric 5. Special wetlands.

Check all that apply and score as indicated

- ☐ Bog (10pts)
- ☐ Fen (10pts)
- ☐ Old growth forest (10pts)
- ☐ Mature forested wetland (5 pts)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10pts)
- ☐ Lake Erie coastal tributary wetland-restricted hydrology (5pts)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10pts)
- ☐ Relict Wet Prairies (10pts)
- ☐ Known occurrence state/federal threatened or endangered species (10pts)
- ☐ Significant migratory songbird/water fowl habitat or usage (10pts)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10pts)

1

40

Max 20 pts.

Subtotal

## Metric 6. Plant communities, interspersions, micro topography..

6a. Wetland Vegetation Communities  
Score all present using 0 to 3 scale.

- |   |             |
|---|-------------|
| 0 | Aquatic Bed |
| 1 | Emergent    |
| 0 | Shrub       |
| 0 | Forest      |
| 0 | Mudflats    |
| 0 | Open Water  |
| 0 | Other _____ |

6b. Horizontal (plan view) Interspersion

Select only one.

- ☐ High (5pts)
- ☐ Moderately high (4pts)
- ☐ Moderate (3pts)
- ☒ Moderately low (2pts)
- ☐ Low (1pts)
- ☐ None (0pts)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.  
Add or deduct points for coverage

- ☐ Extensive >75% cover (-5pts)
- ☒ Moderate 25-75% cover (-3pts)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent >5% cover (0pts)
- ☐ Absent (1pts)

6d. Micro topography  
Score all present using 0 to 3 scale.

- |   |                                 |
|---|---------------------------------|
| 0 | Vegetated hummocks/tussocks     |
| 1 | Coarse woody debris >15cm (6in) |
| 0 | Standing dead >25cm (10in) dbh  |
| 0 | Amphibian breeding pools        |

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part put is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance Tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Micro topography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or In small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

40

GRAND TOTAL (max 100 pts)



## Quantitative Rating

**Metric 1. Wetland area (max 6pts).** Estimate the area of wetland. Select the appropriate size class and assign score. Estimated areas should clearly place the wetland within the appropriate class.

		score
6pts	≥ 50 acres (≥ 20.2ha)	
5pts	25 - <50 acres (10.1 - <20.2ha)	
4pts	10 - <25 acres (4.0 - <10.1ha)	
3pts	3 - <10 acres (1.2 - <4.0ha)	
2pts	0.3 - <3 acres (0.12 - <1.2ha)	2
1pt	0.1 - <0.3 acres (0.04 - <0.12ha)	
0pts	<0.1 acres (0.04ha)	

**Table 2.** Metric to English conversion table with visual estimation sizes

acres	ft <sup>2</sup>	yd <sup>2</sup>	ft on side	yd on side	ha	m <sup>2</sup>	m on side
50	2,177,983	241,998	1476	492	20.2	202,000	449
25	1,088,992	120,999	1044	348	10.1	101,000	318
10	435,596	48,340	660	220	4.1	41,000	203
3	130,679	14,520	362	121	1.2	12,000	110
0.3	13,067	1,452	114	38	0.12	1,200	35
0.1	4,356	484	66	22	0.04	400	20

**Metric 2. Upland buffers and intensity of surrounding land uses. Maximum 14 points.** Wetlands are systems transitional between upland and aquatic environments. Wetlands without "buffers," or that are located where human land use is more intensive, are often, but not always, more degraded.

		score
2a.	<b>Average Buffer Width (abw).</b> Calculate the average buffer width and select only one score. To calculate abw, estimate buffer width on each side (max of 50m) and divide by the number of sides. Example: abw of a wetland with buffers of 100m, 25m, 10m and 0m would be calculated as follows: $abw = (50m + 25m + 10m + 0m)/4 = 21.25m$ . Intensive land uses are not buffers, e.g. active row cropping, recently abandoned fields, paved areas, housing developments, unfenced pasture, etc.	4
7pts	WIDE. >50m (164ft) or more around perimeter	<input type="checkbox"/>
4pts	MEDIUM. 25m to <50m (82 to <164ft) around the perimeter	<input checked="" type="checkbox"/>
1pt	NARROW. 10m to <25m (32 to <82ft) around the perimeter	<input type="checkbox"/>
0pts	VERY NARROW. <10m (<32ft) around perimeter.	<input type="checkbox"/>
2b.	<b>Intensity of predominant surround land use(s).</b> Select one, or double check up to two and average score, for the intensity of the predominant land use(s) outside the wetland's buffer zone (if any).	5
7pts	VERY LOW. 2 <sup>nd</sup> growth or older forest, prairie, savannah, wildlife area, etc.	<input type="checkbox"/>
5pts	LOW. Old field (>10 yrs), shrubland, young 2 <sup>nd</sup> growth forest, etc.	<input checked="" type="checkbox"/>
3pts	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field, etc.	<input type="checkbox"/>
1pt	HIGH. Urban, industrial, open pasture, row cropping, mining, construction, etc.	<input type="checkbox"/>

11

Subtotal



Subtotal from previous page

**Metric 3. Hydrology** Maximum 30 points. **This metric evaluates the wetland's water budget, hydro period, the hydrologic connectivity of the wetland to other surface water, and the degree to which the wetland's hydrology has been altered by human activity.** A wetland can receive no more than 30 points for Metric 3 even though it is possible to score more than 30 points.

		score
3a. <b>Sources of Water.</b> Select all that apply and sum score. This question relates to a wetland's water budget. It also is reflective that wetlands with certain types of water sources, or multiple water sources, e.g. high pH groundwater or perennial surface water connections, can be very high quality wetlands or can have high functions and values.		1
5pts	High pH groundwater (7.5-9.0)	<input type="checkbox"/>
3pts	Other groundwater	<input type="checkbox"/>
1pt	Precipitation	<input checked="" type="checkbox"/>
3pts	Seasonal surface water	<input type="checkbox"/>
5pts	Perennial surface water (lake or stream)	<input type="checkbox"/>
3b. <b>Connectivity.</b> Select all that apply and sum score		3
1pt	<b>100-year floodplain.</b> "Floodplain is defined in OAC Rule 3745-1-50(P) as "...the relatively level land next to a stream or river channel that is periodically submerged by floodwaters. It is composed of alluvium deposited by the present stream or river when it floods." Where they are available, flood insurance rate maps (FIRMs) and flood boundary and floodway maps may be used.	<input type="checkbox"/>
1pt	<b>Between stream/lake and other human land use.</b> This question asks whether the wetland is located <u>between</u> a surface water and a different adjacent land use, such that run-off from the adjacent land use could flow through wetland before it discharges into the surface water. "Different adjacent land uses" include agricultural, commercial, industrial, mining, or residential uses.	<input checked="" type="checkbox"/>
1pt	<b>Part of wetland or upland (e.g. forest, prairie) complex.</b> Both this and the next question ask whether the wetland is in physical proximity to, or a part of other nearby wetland or upland natural areas. The difference is whether the area the wetland is "long and narrow" like a river, or more "suarish" like a large forest or woodlot. If the latter is the case, this question applies: if the former, the next question applies. In a few instances, both may apply.	<input checked="" type="checkbox"/>
1pt	<b>Part of riparian or upland corridor.</b> See description above.	<input checked="" type="checkbox"/>
3c. <b>Maximum water depth.</b> Select only one and assign score. The Rater <i>does not</i> need to actually observe the wetland when its water depth is greatest in order to award the maximum points for this question. The use of secondary indicators, as outlined in the 1987 Manual will be useful in answering this question.		1
3pts	>0.7m (27.6in)	<input type="checkbox"/>
2pts	0.4 to 0.7m (15.7 to 27.6in)	<input type="checkbox"/>
1pt	<0.4m (<15.7in)	<input checked="" type="checkbox"/>
3d. <b>Duration of inundation/saturation.</b> Select one or double-check and average the scores if duration is uncertain. The use of secondary indicator s is necessary and expected in order to properly answer this Question. Categories correspond to Zones II, III, and IV of 1987 Manual (Table 5). Zone IV subdivided into seasonally		1
4pts	Semi permanently to permanently inundated or saturated.	<input type="checkbox"/>
3pts	Regularly inundated or saturated.	<input type="checkbox"/>
2pts	Seasonally inundated.	<input type="checkbox"/>
1pt	Seasonally saturated in the upper 30cm (12in) of soil.	<input checked="" type="checkbox"/>

Subtotal



Subtotal from previous page

- 3e. **Modifications to natural hydrologic regime.** Check all observable modifications from list below. Score by selecting the most appropriate description of the wetland. Scores may be double checked and averaged. This question asks the Rater to evaluate the "intactness" of, or lack of disturbance to, the natural hydrologic regime of the type of wetland that is being evaluated.

It is very important to stress that this question does not discriminate between wetlands with different types of hydrologic regime, e.g. between a forested seep wetland located on a floodplain with seasonal inundation and a leather leaf (*Chamaedaphne calyculata*) bog with precipitation and minor amounts of surface run-off from a small watershed. Rather, it asks the rater to evaluate the "intactness" of the hydrologic regime attributable to *that type of wetland*. In the example above, both the forested seep wetland and the leather leaf bog can score the maximum points (12) if they're no, or no apparent, modifications to the natural hydrologic regime.

Once the Rater has listed all possible past and ongoing disturbances, the Rater should check the most appropriate category to describe the present state of the wetland. In instances where the Rater believes that a wetland falls between two categories, or where the Rater is uncertain as to which category is appropriate, it is appropriate to "double check" and average the score.

The labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a hydrologic disturbance continuum, from very high to very low or no disturbance.

**The Rater may check one or several of these possible disturbance, yet still determine that the natural hydrologic regime is intact. However, see Metric 4 where these same disturbances may be habitat alterations.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	ditch(es), in or near the wetland	<input type="checkbox"/>	point source discharges to the (non-storm water)
<input type="checkbox"/>	tile(s), in or near the wetland	<input type="checkbox"/>	filling/grading activities in or near the wetland
<input type="checkbox"/>	dike(s), in or near the wetland	<input checked="" type="checkbox"/>	road beds/RR beds in or near the wetland
<input type="checkbox"/>	weir(s), in or near the wetland	<input type="checkbox"/>	dredging activities in or near the wetland
<input type="checkbox"/>	storm water inputs (addition of water)	<input type="checkbox"/>	other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 7, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 12 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 9.5
	7		

<b>Select one or double check adjoining number and average the score.</b>			<b>score</b>
			7
12pts	NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.	<input type="checkbox"/>	
7pts	RECOVERED. The wetland appears to have recovered from past modifications.	<input checked="" type="checkbox"/>	
3pts	RECOVERING. The wetland appears to be in the process of recovering from past modifications	<input type="checkbox"/>	
1pt	RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.	<input type="checkbox"/>	

Subtotal



Subtotal from previous page

**Metric 4. Habitat Alteration and Development. Maximum 20 points.** While hydrology may be the single most important determinant for the establishment and maintenance of specific types of wetlands and wetland processes, there is a range of other factors and activities which affect wetland quality and cause disturbances to wetlands that are unrelated to hydrology. This metric attempts to evaluate these things under the rubric "habitat alteration." In many instances, items checked as possible hydrologic disturbances in Question 3e will be instead alterations to a wetland's habitat or disruptions in its development (succession state). In other instances, a disturbance may be appropriately considered under both Metric 3 and Metric 4. In any case, the Rater should carefully consider what is the actual proximate (direct) cause of the disturbance to the wetland.

4a. **Substrate/Soil Disturbance.** Select one or double check and average. This question evaluates physical disturbances to the soil and surface substrates of the wetland. Note also that the labels on the scoring categories are intended to be descriptive but not controlling. In some instances, it may be more appropriate to consider the scoring categories as fixed locations on a disturbance continuum, from very high to very low or no disturbance.

Examples of substrate/soil disturbance include filling and grading, plowing, grazing (hooves), vehicle use (motorbikes, off-road vehicles, construction vehicles), sedimentation, dredging, and other mechanical disturbances to the surface substrates or soils.

**Circle one answer.** Have any of soil or substrate disturbances caused or appear to have caused more than trivial alterations to the wetland's natural soils or substrates, or have they occurred so far in the past that current conditions should be considered to be "natural"?

**YES** ☒

Assign a score 1, 2 or 3, or an intermediate score, depending on degree of recovery from the disturbance.

3

**NO** ☐

Assign a score of 4 since there are no or no apparent modifications.

**NOT SURE** ☐

Double check "none or none apparent" and "recovered" and assign a score of 3.5

Select one or double check adjoining number and average the score.

score

3

4pts NONE OR NONE APPARENT. There are no modifications or no modifications that are apparent to the Rater.

☐

3pts RECOVERED. The wetland appears to have recovered from past modifications.

☒

2pts RECOVERING. The wetland appears to be in the process of recovering from past modifications

☐

1pt RECENT OR NO RECOVERY. The modifications have occurred, recently occurred, and/or the wetland has not recovered from past modifications, and/or the modifications are ongoing.

☐

4b. **Habitat development.** Select only one and assign score. This question asks the Rater to assign an overall qualitative rating of how well developed the wetland is in comparison to other ecologically or hydrogeomorphically similar wetlands. This question presumes a good sense of the types of wetlands and the range in quality typical of the region, watershed, or state.

3

7pts EXCELLENT. Wetland appears to represent the best of its type or class.

☐

6pts VERY GOOD. Wetland appears to be a very good example of its type or class but is lacking in characteristics, which would make it excellent.

☐

5pts GOOD. Wetland appears to be a good example of its type or class but because of past or present disturbances, successional state, or other reasons, is not excellent.

☐

4pts MODERATELY GOOD. Wetland appears to be a fair to good example of its type or class.

☐

3pts FAIR. Wetland appears to be a moderately good example of its type or class but because of past or present disturbances, successional state, etc. is not good.

☒

2pts POOR TO FAIR. Wetland appears to be a poor to fair example of its type or class.

☐

1pt POOR. Wetland appears to not be a good example of its type or class because of past or present disturbances, successional state, etc.

☐

Subtotal



Subtotal from previous page

- 4c. **Habitat alteration.** This question evaluates the "intactness" the natural habitat of the type of wetland that is being evaluated. This question does not discriminate between wetlands with different types of habitat. Check all possible alterations that are observed. All available information, field visits, aerial photos, maps, etc. can be used to identify a possible alteration. Evaluate whether the alteration is trivial in relation to the wetlands overall habitat. Select the most appropriate score that best describes the present state of the wetland. It is appropriate to "double check" and average scores. In some instances, the scores can be viewed as a habitat alteration continuum, from very high to very low or no disturbance. **The Rater may check one or several of these possible disturbances, yet still determine that the natural habitat is intact.**

Check all that are observed present in or near the wetland

<input type="checkbox"/>	Mowing	<input type="checkbox"/>	Herbaceous layer/aquatic bed removal
<input type="checkbox"/>	Grazing (cattle, sheep, pigs, etc.)	<input type="checkbox"/>	Sedimentation
<input type="checkbox"/>	Clear cutting	<input type="checkbox"/>	Dredging
<input type="checkbox"/>	Selective cutting	<input type="checkbox"/>	Farming
<input type="checkbox"/>	Woody debris removal	<input type="checkbox"/>	Nutrient enrichment, e.g. nuisance algae
<input type="checkbox"/>	Toxic pollutants	<input type="checkbox"/>	Other (specify)
<input type="checkbox"/>	Shrub/sapling removal	<input type="checkbox"/>	Other (specify)

<b>Circle one answer.</b> Have any of the disturbances identified above caused or appear to have caused more than trivial alterations to the wetland's natural hydrologic regime, or have they occurred so far in the past that current hydrology should be considered to be "natural"?	<b>YES</b>  Assign a score 1, 3 or 6, or an intermediate score, depending on degree of recovery from the disturbance.	<b>NO</b>  Assign a score of 9 since there are no or no apparent modifications.	<b>NOT SURE</b>  Double check "none or none apparent" and "recovered" and assign a score of 7.5
	X		
<b>Select one or double check adjoining number and average the score.</b>			<b>score</b> 9
9pts	NONE OR NONE APPARENT. There are no alterations or no alterations that are apparent to the Rater.		<input checked="" type="checkbox"/>
6pts	RECOVERED. The wetland appears to have recovered from past alterations.		<input type="checkbox"/>
3pts	RECOVERING. The wetland appears to be in the process of recovering from past alterations/		<input type="checkbox"/>
1pt	RECENT OR NO RECOVERY. The alterations/ have occurred, recently occurred, and/or the wetland has not recovered from past alterations/, and/or the alterations/ are ongoing.		<input type="checkbox"/>

**Metric 5. Special wetland communities. Maximum 10 points.** Assign or deduct points if wetland has the feature described. Refer to Narrative Rating for guidance. No wetland can receive more than 10 points even if multiple categories are applicable.

<input type="checkbox"/>	Bog (10pts)	<input type="checkbox"/>	Lake plains sand prairies (Oak Openings) (10 pts)
<input type="checkbox"/>	Fen (10 pts)	<input type="checkbox"/>	Relict wet prairies (10 pts)
<input type="checkbox"/>	Old Growth Forest (10 pts)	<input type="checkbox"/>	Known occurrence of threatened/endangered species (10pts)
<input type="checkbox"/>	Mature Forested Wetland (5 pts)	<input type="checkbox"/>	Significant migratory songbird/waterfowl habitat (10 pts)
<input type="checkbox"/>	Coastal wetlands, unrestricted hydrology (10 pts)	<input type="checkbox"/>	Category 1 wetlands (See Narrative Rating #5) (-10 pts)
<input type="checkbox"/>	Coastal wetlands, restricted hydrology (5 pts)		

Subtotal



Subtotal from previous page

**Metric 6. Vegetation, Interspersion, and Microtopography. Maximum 20 points.**

6a.	<b>Wetland Vegetation Communities.</b> Check each community present <u>both vertically and horizontally</u> within the wetland with an area of at least 0.1hectares or 100m <sup>2</sup> (0.2471 acres). Assign a score of 0 to 3 using Tables 3, Table 4 or Table 5. Sum the scores for the classes present.	1
<input type="checkbox"/>	<b>Aquatic Bed.</b> Includes areas of wetlands dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Floating aquatic species like duckweed ( <i>Lemna</i> spp., <i>spirodelasp.</i> ) are excluded from definition of "aquatic bed." Aquatic beds often occur as a distinct zone as an "understory" below shrubs or trees.	0
<input checked="" type="checkbox"/>	<b>Emergent.</b> Includes areas of wetland dominated by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Common names for emergent communities include marsh, wet meadow, wet prairie, sedge meadow, fens, prairie pothole, and bluejoint slough.	1
<input type="checkbox"/>	<b>Shrub.</b> Includes areas of wetlands dominated by woody vegetation less than 6m (20ft) tall. The plant species include true shrubs, young trees, or trees or shrubs that are small or stunted because of environmental conditions. Shrub wetlands may represent a successional stage leading to a forested wetland or they may be relatively stable plant communities.	0
<input type="checkbox"/>	<b>Forested.</b> Includes wetlands or areas of wetlands characterized by wood vegetation greater than 6m (20ft) or taller. Forested wetlands have an overstory of trees and often contain an understory of young trees and shrubs and an herbaceous layer, although the young tree/shrub and herbaceous layers can be largely missing from some types of forested wetlands. Some forested wetlands are defined as "vernal pools" in OAC Rule 3745-1-50.	0
<input type="checkbox"/>	<b>Open water.</b> The "open water" class is equivalent to the "unconsolidated bottom/mud" class/subclass (pub <sub>3</sub> ) described in Cowardin et al. (1979) and includes areas of wetlands characterized by exposed or shallowly inundated substrates with vegetative cover less than 30%.	0
<input type="checkbox"/>	<b>Other</b> (See User's Manual)	

**Table 3. Use this table to assign a cover score for Metric 6a to each of the vegetation communities identified on the preceding page. Refer to Table 6 for narrative descriptions of what "low," "moderate," and "high" quality mean.**

Cover scale	Description
0	the vegetation community is either, 1) absent from wetland, or 2) comprises less than 0.1ha (0.2471 acres) of contiguous area within the wetland
1	vegetation community is present and either, 1) comprises a small part of the wetland's vegetation and is of low or moderate quality, or 2) if it comprises a significant part of the wetland's vegetation, the community is of low quality
2	the vegetation community is present and either, 1) comprises a significant part of the wetland's vegetation and is of moderate quality, or 2) the vegetation community comprises a small part of the wetland's vegetation but is of high quality.
3	the vegetation community is of high quality and comprises a significant part, or more of the wetland's vegetation

**Table 4. Use this table in conjunction with Table 5 to determine what is a "low," "moderate," or "high quality community"**

narrative	description
low	Low species diversity and/or a predominance of non-native or disturbance tolerant native species
moderate	Native species are the dominant component of the vegetation, although non-native or disturbance tolerant native species can also be present, and species diversity is moderate to moderately high, but generally without the presence of rare, threatened, or endangered species.
high	A predominance of native species, with non-native species absent or virtually absent, and high species diversity and sometimes, but not always, the presence of rare, threatened or endangered species.

**Table 5. Mudflat and open water community cover scale**

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1ha to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Subtotal



Subtotal from previous page

6b. <b>Horizontal (plan view) interspersions.</b> Select only one and assign score. Evaluate the wetland from a "plan view," i.e. as if the looking down upon it. See Figure 1.		2
5pts	HIGH. Wetland has a high degree of interspersions	<input type="checkbox"/>
4pts	MODERATELY HIGH. Wetland has a moderately high degree of interspersions	<input type="checkbox"/>
3pts	MODERATE. Wetland has a moderate degree of interspersions	<input type="checkbox"/>
2pts	MODERATELY LOW. Wetland has a moderately low degree of interspersions	<input checked="" type="checkbox"/>
1pt	LOW. Wetland has a low degree of interspersions	<input type="checkbox"/>
0pts	NONE. Wetland has no plan view interspersions	<input type="checkbox"/>

6c. <b>Coverage of Invasive Plant Species.</b> Refer to Table 1 on Page 7 for list. Select only one and assign score.		-3
-5pts	Extensive. >75% areal cover of invasive species	<input type="checkbox"/>
-3pts	Moderate 25-75% areal cover of invasive species	<input checked="" type="checkbox"/>
-1pt	Sparse. 5-25% areal cover of invasive species	<input type="checkbox"/>
0pts	Nearly absent. <5% areal cover of invasive species	<input type="checkbox"/>
1pt	Absent	<input type="checkbox"/>

6d. <b>Microtopography.</b> Check each feature present in the wetland. Assign cover score of 0 to 3 using Table 6. Evaluate various microtopographic habitat features often present in wetlands.		1
Vegetated hummocks and tussocks.		<input type="checkbox"/>
Coarse woody debris >15cm (6in) diameter		<input checked="" type="checkbox"/>
Standing dead trees >25cm (10in) diameter at breast height		<input type="checkbox"/>
Amphibian breeding habitat, e.g. vernal pools with standing water of sufficient duration and depth to support reproduction, or habitat for from reproduction		<input type="checkbox"/>

Table 6. Cover scale for microtopographic habitat features.

Microtopographic habitat quality	narrative description
0	Feature is absent or functionally absent from the wetland
1	Feature is present in the wetland in very small amounts or if more common, of low quality
2	Feature is present in moderate amounts, but not of highest quality, or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

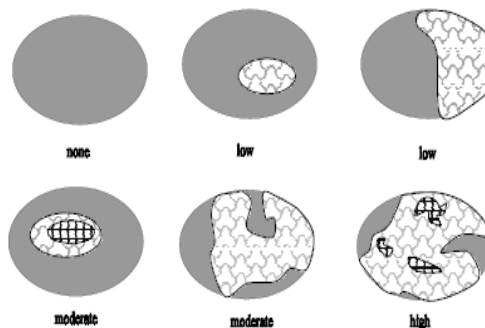


Figure 1. Hypothetical wetlands for estimating degree of interspersions.

GRAND TOTAL

**End of Quantitative Rating. Complete Categorization Worksheets.**

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: <http://www.epa.state.oh.us/dsw/401/401.html>



## Appendix E

*QHEI and HHEI Forms*





SITE NAME/LOCATION W. Lancaster-S.Baltimore-W.MillersportSITE NUMBER ST-31-PER

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.37LENGTH OF STREAM REACH (ft) 200LAT. 39.89130LONG. -82.56970

RIVER CODE

RIVER MILE 1.14DATE 03/27/24SCORER Nathan Barry

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:
☐ NONE / NATURAL CHANNEL
 ☐ RECOVERED
 ☐ RECOVERING
 ☒ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input checked="" type="checkbox"/> SILT [3 pt]	<u>55%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>0%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>0%</u>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>0%</u>	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>40%</u>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>0%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>5%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock 0.00%

(A)

Substrate Percentages  
Check: 100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3TOTAL NUMBER OF SUBSTRATE TYPES: 3HHEI  
Metric  
PointsSubstrate  
Max = 40

6

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input checked="" type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth  
Max = 30

20

COMMENTS

MAXIMUM POOL DEPTH (centimeters): 45

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

Bankfull  
Width  
Max=30

20

COMMENTS

AVERAGE BANKFULL WIDTH (meters): 3.00

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

FLOODPLAIN QUALITY

L	R	(Per Bank)	L	R	(Most Predominant per Bank)	L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m	<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m	<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

COMMENTS

- FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

- SINUOSITY** (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft)
 ☒ Flat to Moderate
 ☐ Moderate (2 ft/100 ft)
 ☐ Moderate to Severe
 ☐ Severe (10 ft/100 ft)

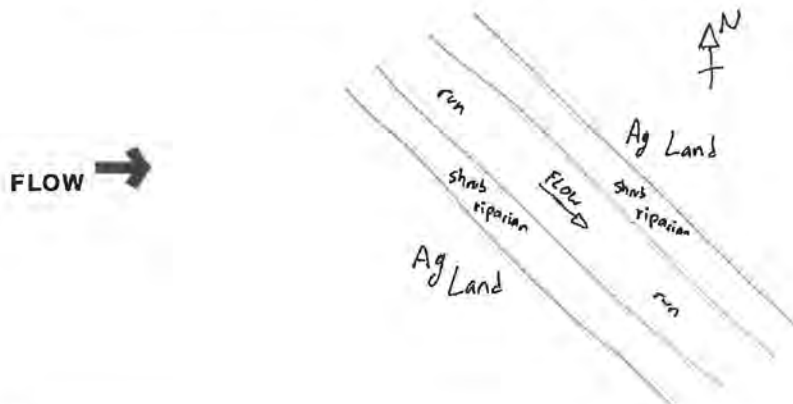


**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order County: Fairfield Township / City: Baltimore**MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: 03/26/24 Quantity: 0.30Photograph Information: Elevated Turbidity? (Y/N): ☒ Y Canopy (% open): 100%Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number: N/AField Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N): ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)Fish Observed? (Y/N): ☒ N Voucher? (Y/N): ☒ N Salamanders Observed? (Y/N): ☒ N Voucher? (Y/N): ☒ N  
Frogs or Tadpoles Observed? (Y/N): ☒ N Voucher? (Y/N): ☒ N Aquatic Macroinvertebrates Observed? (Y/N): ☒ N Voucher? (Y/N): ☒ NComments Regarding Biology: **DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Stream &amp; Location: W. Lancaster - S. Baltimore - W. Millersport

RM: Date: 3 / 27 / 24

ST-25-PER

Scorers Full Name &amp; Affiliation:

V3 Companies - Nathan Barnett

River Code:

STORET #:

Lat./ Long.: 39 . 87185 182 . 57663

Office verified location ☐1) SUBSTRATE Check ONLY Two substrate TYPE BOXES;  
estimate % or note every type present

Check ONE (Or 2 &amp; average)

**BEST TYPES** **POOL RIFFLE** **OTHER TYPES** **POOL RIFFLE**

☐ BLDR /SLABS [10] ☐ ☐ ☐ HARDPAN [4] 20

☐ BOULDER [9] ☐ ☐ DETRITUS [3] ☐ ☐ MUCK [2]

☐ COBBLE [8] ☐ ☐ ☐ SILT [2] 60 30

☐ GRAVEL [7] ☐ ☐ ARTIFICIAL [0]

☐ SAND [6] 20 25

☐ BEDROCK [5]

**ORIGIN****QUALITY**☐ LIMESTONE [1]☐ HEAVY [-2]☒ SILT [1]☒ MODERATE [-1]☐ WETLANDS [0]☐ NORMAL [0]☐ HARDPAN [0]☐ FREE [1]☐ SANDSTONE [0]☐ EXTENSIVE [-2]☐ RIP/RAP [0]☒ MODERATE [-1]☐ LACUSTURINE [0]☐ NORMAL [0]☐ SHALE [-1]☐ NONE [1]☐ COAL FINES [-2]NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]

Comments

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

**AMOUNT**

Check ONE (Or 2 &amp; average)

1 UNDERCUT BANKS [1]

0 POOLS &gt; 70cm [2]

0 OXBOWS, BACKWATERS [1]

☐ EXTENSIVE >75% [11]

0 OVERHANGING VEGETATION [1]

0 ROOTWADS [1]

0 AQUATIC MACROPHYTES [1]

☐ MODERATE 25-75% [7]

0 SHALLOWS (IN SLOW WATER) [1]

0 BOULDERS [1]

0 LOGS OR WOODY DEBRIS [1]

☒ SPARSE 5-<25% [3]

1 ROOTMATS [1]

☒ NEARLY ABSENT <5% [1]

Comments

Cover  
Maximum  
20

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 &amp; average)

**SINUOSITY****DEVELOPMENT****CHANNELIZATION****STABILITY**☐ HIGH [4]☐ EXCELLENT [7]☐ NONE [6]☐ HIGH [3]☐ MODERATE [3]☐ GOOD [5]☐ RECOVERED [4]☒ MODERATE [2]☒ LOW [2]☒ FAIR [3]☒ RECOVERING [3]☐ LOW [1]☐ NONE [1]☐ POOR [1]☐ RECENT OR NO RECOVERY [1]

Comments

Channel  
Maximum  
20

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank &amp; average)

River right looking downstream

**EROSION****RIPARIAN WIDTH****FLOOD PLAIN QUALITY**☐ NONE / LITTLE [3]☐ WIDE > 50m [4]☐ FOREST, SWAMP [3]☐ CONSERVATION TILLAGE [1]☒ MODERATE [2]☐ MODERATE 10-50m [3]☐ SHRUB OR OLD FIELD [2]☐ URBAN OR INDUSTRIAL [0]☐ HEAVY / SEVERE [1]☒ NARROW 5-10m [2]☒ RESIDENTIAL, PARK, NEW FIELD [1]☐ MINING / CONSTRUCTION [0]☒ VERY NARROW < 5m [1]☐ FENCED PASTURE [1]Indicate predominant land use(s)  
past 100m riparian.☐ NONE [0]☐ OPEN PASTURE, ROWCROP [0]

Comments

Riparian  
Maximum  
10

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

**MAXIMUM DEPTH****CHANNEL WIDTH****CURRENT VELOCITY****Recreation Potential****Primary Contact****Secondary Contact**

(circle one and comment on back)

Check ONE (ONLY!)

Check ONE (Or 2 &amp; average)

Check ALL that apply

☐ > 1m [6]☒ POOL WIDTH > RIFFLE WIDTH [2]☐ TORRENTIAL [-1]☐ SLOW [1]☐ 0.7-<1m [4]☐ POOL WIDTH = RIFFLE WIDTH [1]☐ VERY FAST [1]☐ INTERSTITIAL [-1]☒ 0.4-<0.7m [2]☐ POOL WIDTH < RIFFLE WIDTH [0]☒ FAST [1]☐ INTERMITTENT [-2]☐ 0.2-<0.4m [1]☒ MODERATE [1]☐ EDDIES [1]☐ < 0.2m [0]

Indicate for reach - pools and riffles.

Comments

Pool /  
Current  
Maximum  
12

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 &amp; average).

☐ NO RIFFLE [metric=0]**RIFFLE DEPTH****RUN DEPTH****RIFFLE / RUN SUBSTRATE****RIFFLE / RUN EMBEDDEDNESS**☐ BEST AREAS > 10cm [2]☐ MAXIMUM > 50cm [2]☐ STABLE (e.g., Cobble, Boulder) [2]☐ NONE [2]☐ BEST AREAS 5-10cm [1]☒ MAXIMUM < 50cm [1]☒ MOD. STABLE (e.g., Large Gravel) [1]☐ LOW [1]☒ BEST AREAS < 5cm [metric=0]☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]☒ MODERATE [0]Riffle /  
Run  
Maximum  
8

Comments

6) GRADIENT ( 39 ft/mi)

☐ VERY LOW - LOW [2-4]

%POOL: 20

%GLIDE: 0

Gradient  
Maximum  
10**DRAINAGE AREA**☐ MODERATE [6-10]

%RUN: 70

%RIFFLE: 10

( 1.2 mi<sup>2</sup>)☒ HIGH - VERY HIGH [10-6]



**A) SAMPLED REACH**

Check ALL that apply

**METHOD**

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

**STAGE**

- 1st -sample pass- 2nd  
☐ HIGH ☐  
☐ UP ☐  
☒ NORMAL ☒  
☐ LOW ☐  
☐ DRY ☐

**DISTANCE**

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☒ OTHER

40

meters

**CANOPY**

- ☒ > 85%- OPEN  
☐ 55%-<85%  
☐ 30%-<55%  
☐ 10%-<30%  
☐ <10%- CLOSED

**CLARITY**

- 1st --sample pass-- 2nd  
☒ < 20 cm ☒  
☐ 20-<40 cm ☐  
☐ 40-70 cm ☐  
☐ > 70 cm/ CTB ☐  
☐ SECCHI DEPTH ☐

1st \_\_\_\_\_ cm

2nd \_\_\_\_\_ cm

**C) RECREATION**

AREA DEPTH  
 POOL: ☐ >100ft<sup>2</sup> ☐ >3ft

**B) AESTHETICS**

- ☐ NUISANCE ALGAE  
☐ INVASIVE MACROPHYTES  
☒ EXCESS TURBIDITY  
☐ DISCOLORATION  
☐ FOAM / SCUM  
☐ OIL SHEEN  
☐ TRASH / LITTER  
☐ NUISANCE ODOR  
☐ SLUDGE DEPOSITS  
☐ CSOs/SSOs/OUTFALLS

**D) MAINTENANCE**

- PUBLIC ~~PRIVATE~~ BOTH / NA  
 ACTIVE ~~HISTORIC~~ BOTH / NA  
 YOUNG-SUCCESSION-OLD  
 SPRAY / SNAG / REMOVED  
 MODIFIED / DIPPED OUT / NA  
 LEVEED / ONE SIDED  
 RELOCATED / CUTOFFS  
~~MOVING-BEDLOAD~~ STABLE  
 ARMoured / SLUMPS  
 ISLANDS / SCoured  
 IMPOUNDED / DESICCATED  
 FLOOD CONTROL ~~DRAINAGE~~

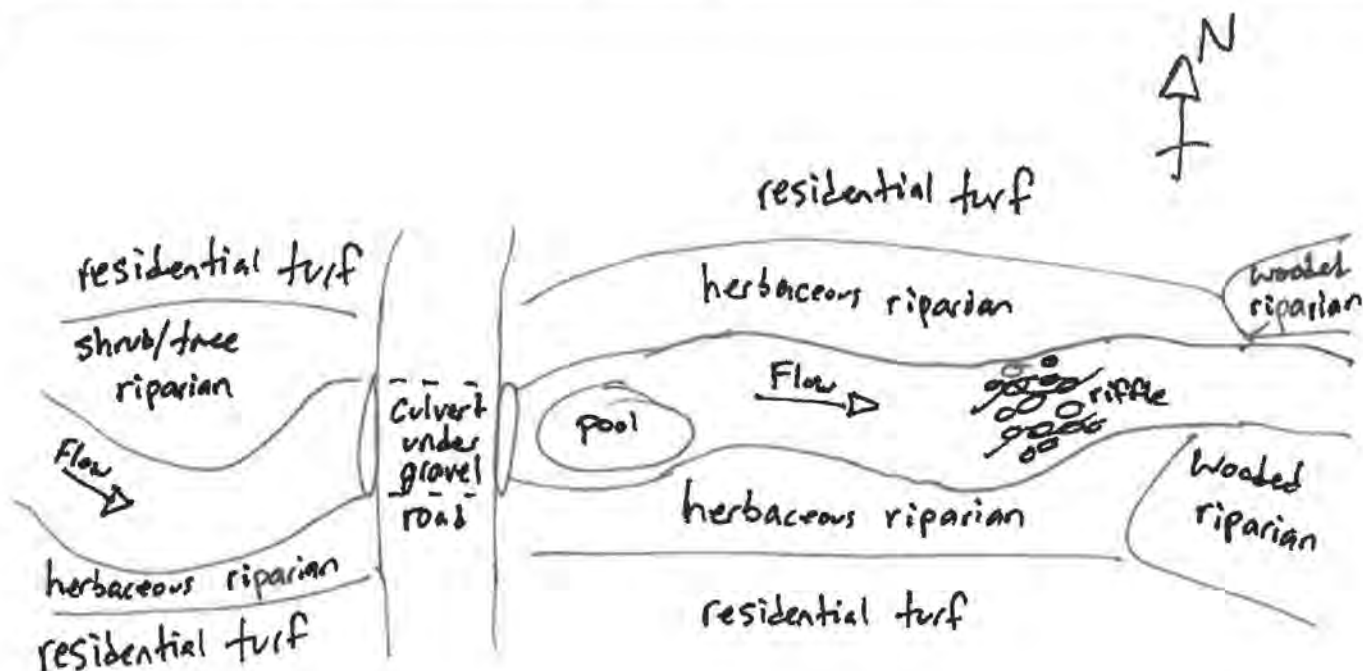
Circle some &amp; COMMENT

**E) ISSUES**

- WWTP / CSO / NPDES / INDUSTRY  
 HARDENED / URBAN / DIRT&GRIME  
 CONTAMINATED / LANDFILL  
 BMPs-CONSTRUCTION ~~SEDIMENT~~  
 LOGGING / IRRIGATION / COOLING  
~~BANK / EROSION~~ SURFACE  
~~FALSE BANK~~ MANURE / LAGOON  
 WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE  
 ACID / MINE / QUARRY / FLOW  
 NATURAL / WETLAND / STAGNANT  
 PARK / GOLF ~~LAWN~~ HOME  
 ATMOSPHERE / DATA PAUCITY

**F) MEASUREMENTS**

- $\bar{x}$  width  
 $\bar{x}$  depth  
 max. depth  
 $\bar{x}$  bankfull width  
 bankfull  $\bar{x}$  depth  
 W/D ratio  
 bankfull max. depth  
 floodprone  $x^2$  width  
 entrench. ratio  
 Legacy Tree:

**Stream Drawing:**



Stream &amp; Location: W. Lancaster - S. Baltimore - W. Millersport

RM: \_\_\_\_\_ Date: 3/ 27/ 24

ST-15-PER

Scorers Full Name &amp; Affiliation: V3 Companies - Nathan Barnett

River Code: - - - STORET #: Lat./ Long.: 39 . 85415 / 82 . 58457

Office verified location ☐1) SUBSTRATE Check ONLY Two substrate TYPE BOXES;  
estimate % or note every type present

Check ONE (Or 2 &amp; average)

BEST TYPES	POOL RIFFLE	OTHER TYPES	POOL RIFFLE
<input type="checkbox"/> BLDR /SLABS [10]	<input type="checkbox"/>	<input checked="" type="checkbox"/> HARDPAN [4]	40
<input type="checkbox"/> BOULDER [9]	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS [3]	
<input type="checkbox"/> COBBLE [8]	<input type="checkbox"/>	<input type="checkbox"/> MUCK [2]	
<input type="checkbox"/> GRAVEL [7]	<input type="checkbox"/>	<input checked="" type="checkbox"/> SILT [2]	50
<input type="checkbox"/> SAND [6]	10	<input type="checkbox"/> ARTIFICIAL [0]	
<input type="checkbox"/> BEDROCK [5]			

ORIGIN

QUALITY

☐ LIMESTONE [1]☒ HEAVY [-2]☒ TILLS [1]☐ MODERATE [-1]☐ WETLANDS [0]☐ NORMAL [0]☐ HARDPAN [0]☐ FREE [1]☐ SANDSTONE [0]☒ EXTENSIVE [-2]☐ RIP/RAP [0]☐ MODERATE [-1]☐ LACUSTURINE [0]☐ NORMAL [0]☐ SHALE [-1]☐ NONE [1]☐ COAL FINES [-2]NUMBER OF BEST TYPES: ☐ 4 or more [2] sludge from point-sources☒ 3 or less [0]

Comments

Substrate  
3  
Maximum  
20

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 &amp; average)

1 UNDERCUT BANKS [1]

0 POOLS &gt; 70cm [2]

0 OXBOWS, BACKWATERS [1]

☐ EXTENSIVE >75% [11]

1 OVERHANGING VEGETATION [1]

1 ROOTWADS [1]

0 AQUATIC MACROPHYTES [1]

☐ MODERATE 25-75% [7]

0 SHALLOWS (IN SLOW WATER) [1]

0 BOULDERS [1]

2 LOGS OR WOODY DEBRIS [1]

☒ SPARSE 5-25% [3]

1 ROOTMATS [1]

Comments

Cover  
Maximum  
20  
9

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 &amp; average)

SINUOSITY

DEVELOPMENT

CHANNELIZATION

STABILITY

☐ HIGH [4]☐ EXCELLENT [7]☐ NONE [6]☐ HIGH [3]☐ MODERATE [3]☐ GOOD [5]☐ RECOVERED [4]☒ MODERATE [2]☒ LOW [2]☒ FAIR [3]☒ RECOVERING [3]☐ LOW [1]☐ NONE [1]☐ POOR [1]☐ RECENT OR NO RECOVERY [1]

Comments

Channel  
Maximum  
20  
10

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank &amp; average)

River right looking downstream

EROSION

RIPARIAN WIDTH

FLOOD PLAIN QUALITY

☐ NONE / LITTLE [3]☐ WIDE > 50m [4]☐ FOREST, SWAMP [3]☐ CONSERVATION TILLAGE [1]☒ MODERATE [2]☐ MODERATE 10-50m [3]☐ SHRUB OR OLD FIELD [2]☐ URBAN OR INDUSTRIAL [0]☐ HEAVY / SEVERE [1]☒ NARROW 5-10m [2]☐ RESIDENTIAL, PARK, NEW FIELD [1]☐ MINING / CONSTRUCTION [0]☒ VERY NARROW < 5m [1]☐ FENCED PASTURE [1]Indicate predominant land use(s)  
past 100m riparian.☐ NONE [0]☒ OPEN PASTURE, ROWCROP [0]

Comments

Riparian  
Maximum  
10  
3

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

CHANNEL WIDTH

CURRENT VELOCITY

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Check ONE (ONLY!)

Check ONE (Or 2 &amp; average)

Check ALL that apply

☐ > 1m [6]☒ POOL WIDTH > RIFFLE WIDTH [2]☐ TORRENTIAL [-1]☐ SLOW [1]☐ 0.7-1m [4]☐ POOL WIDTH = RIFFLE WIDTH [1]☐ VERY FAST [1]☐ INTERSTITIAL [-1]☒ 0.4-0.7m [2]☐ POOL WIDTH < RIFFLE WIDTH [0]☐ FAST [1]☐ INTERMITTENT [-2]☐ 0.2-0.4m [1]☒ MODERATE [1]☐ EDDIES [1]☐ < 0.2m [0]

Indicate for reach - pools and riffles.

Comments

Pool /  
Current  
Maximum  
12  
5

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 &amp; average).

☐ NO RIFFLE [metric=0]

RIFFLE DEPTH

RUN DEPTH

RIFFLE / RUN SUBSTRATE

RIFFLE / RUN EMBEDDEDNESS

☐ BEST AREAS > 10cm [2]☐ MAXIMUM > 50cm [2]☐ STABLE (e.g., Cobble, Boulder) [2]☐ NONE [2]☐ BEST AREAS 5-10cm [1]☒ MAXIMUM < 50cm [1]☐ MOD. STABLE (e.g., Large Gravel) [1]☐ LOW [1]☐ BEST AREAS < 5cm [metric=0]☒ UNSTABLE (e.g., Fine Gravel, Sand) [0]☐ MODERATE [0]

Comments No riffles in sampled reach

☒ EXTENSIVE [-1]Riffle /  
Run  
Maximum  
8  
0

6) GRADIENT (

☒ VERY LOW - LOW [2-4]

%POOL: 30

%GLIDE: 0

Gradient  
Maximum  
10  
3

DRAINAGE AREA

☐ MODERATE [6-10]

%RUN: 70

%RIFFLE: 0

( 4.43 mi<sup>2</sup>)☐ HIGH - VERY HIGH [10-6]



**A) SAMPLED REACH**

Check ALL that apply

**METHOD**

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

**STAGE**

1st -sample pass- 2nd

- ☐ HIGH  
☐ UP  
☒ NORMAL  
☐ LOW  
☐ DRY

**DISTANCE**

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☒ OTHER

50

meters

**CANOPY**

- ☒ > 85%- OPEN  
☐ 55%-<85%  
☐ 30%-<55%  
☐ 10%-<30%  
☐ <10%- CLOSED

**CLARITY**

1st --sample pass-- 2nd

- ☒ < 20 cm  
☐ 20-<40 cm  
☐ 40-70 cm  
☐ > 70 cm/ CTB  
☐ SECCHI DEPTH

1st \_\_\_\_\_ cm

2nd \_\_\_\_\_ cm

**C) RECREATION**AREA DEPTH  
POOL: ☐ >100ft<sup>2</sup> ☐ >3ft**B) AESTHETICS**

- ☐ NUISANCE ALGAE  
☐ INVASIVE MACROPHYTES  
☒ EXCESS TURBIDITY  
☐ DISCOLORATION  
☐ FOAM / SCUM  
☐ OIL SHEEN  
☐ TRASH / LITTER  
☐ NUISANCE ODOR  
☐ SLUDGE DEPOSITS  
☐ CSOs/SSOs/OUTFALLS

**D) MAINTENANCE**

- ☐ PUBLIC ☒ PRIVATE ☐ BOTH / NA  
☐ ACTIVE ☒ HISTORIC ☐ BOTH / NA  
☐ YOUNG-SUCCESSION-OLD  
☐ SPRAY / SNAG / REMOVED  
☐ MODIFIED / DIPPED OUT / NA  
☐ LEVEED / ONE SIDED  
☐ RELOCATED / CUTOFFS  
☒ MOVING-BEDLOAD-STABLE  
☐ ARMoured / SLUMPS  
☒ ISLANDS / SCoured  
☐ IMPOUNDED / DESICCATED  
☒ FLOOD CONTROL / DRAINAGE

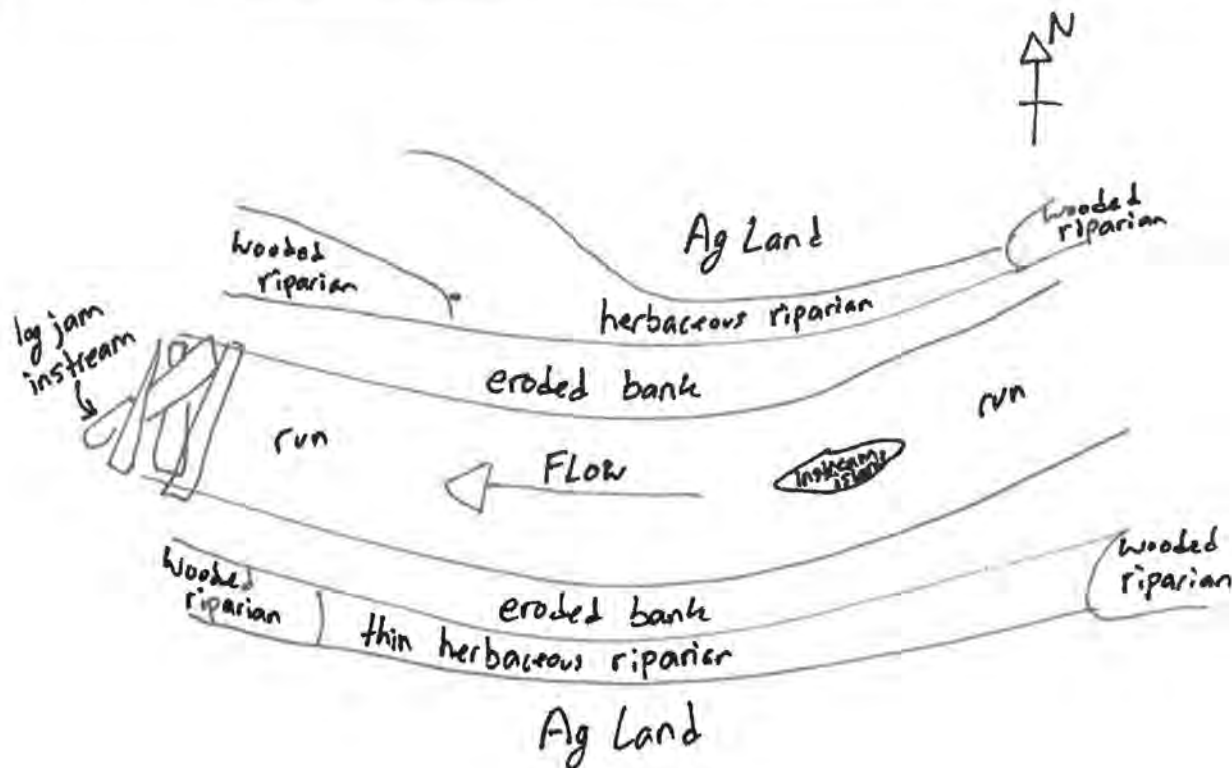
Circle some &amp; COMMENT

**E) ISSUES**

- WWTP / CSO / NPDES / INDUSTRY  
 HARDENED / URBAN / DIRT&GRIME  
 CONTAMINATED / LANDFILL  
 BMPs-CONSTRUCTION-☒ SEDIMENT  
 LOGGING / IRRIGATION / COOLING  
☒ BANK / EROSION / SURFACE  
☒ FALSE BANK / MANURE / LAGOON  
 WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE  
 ACID / MINE / QUARRY / FLOW  
 NATURAL / WETLAND / STAGNANT  
 PARK / GOLF / LAWN / HOME  
 ATMOSPHERE / DATA PAUCITY

**F) MEASUREMENTS**

- $\bar{x}$  width  
 $\bar{x}$  depth  
 max. depth  
 $\bar{x}$  bankfull width  
 bankfull  $\bar{x}$  depth  
 W/D ratio  
 bankfull max. depth  
 floodprone  $x^2$  width  
 entrench. ratio  
 Legacy Tree:

**Stream Drawing:**

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.



Stream &amp; Location: W. Lancaster - S. Baltimore - W. Millersport

RM: \_\_\_\_\_ Date: 3 / 28 / 24

Walnut Creek

Scorers Full Name &amp; Affiliation: V3 Companies - Emily Holt

River Code: - - -

STORET #: - - -

Lat./ Long.: 39 . 7020 182 . 6401

Office verified location ☐1) **SUBSTRATE** Check **ONLY** Two substrate TYPE BOXES;  
estimate % or note every type present

Check ONE (Or 2 &amp; average)

BEST TYPES	POOL RIFFLE	OTHER TYPES	POOL RIFFLE
<input type="checkbox"/> BLDR / SLABS [10]	_____	<input type="checkbox"/> HARDPAN [4]	_____
<input type="checkbox"/> BOULDER [9]	_____	<input type="checkbox"/> DETRITUS [3]	_____
<input checked="" type="checkbox"/> COBBLE [8]	50	<input type="checkbox"/> MUCK [2]	_____
<input checked="" type="checkbox"/> GRAVEL [7]	50	<input type="checkbox"/> SILT [2]	_____
<input type="checkbox"/> SAND [6]	_____	<input type="checkbox"/> ARTIFICIAL [0]	_____
<input type="checkbox"/> BEDROCK [5]	_____	(Score natural substrates; ignore sludge from point-sources)	

 NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]

Comments

 ORIGIN  
☐ LIMESTONE [1]  
☒ TILLS [1]  
☐ WETLANDS [0]  
☐ HARDPAN [0]  
☐ SANDSTONE [0]  
☐ RIP/RAP [0]  
☐ LACUSTURINE [0]  
☐ SHALE [-1]  
☐ COAL FINES [-2]

 QUALITY  
☐ HEAVY [-2]  
☐ MODERATE [-1]  
☒ NORMAL [0]  
☐ FREE [1]  
☐ EXTENSIVE [-2]  
☐ MODERATE [-1]  
☒ NORMAL [0]  
☐ NONE [1]

SILT

EMBEDDEDNESS

 Substrate  
 16  
 Maximum 20

 2) **INSTREAM COVER** Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

 AMOUNT  
 Check ONE (Or 2 & average)

0 UNDERCUT BANKS [1]	2 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]
0 OVERHANGING VEGETATION [1]	0 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]
0 ROOTMATS [1]		

☐ EXTENSIVE >75% [11]  
☒ MODERATE 25-75% [7]  
☐ SPARSE 5-<25% [3]  
☐ NEARLY ABSENT <5% [1]

Comments

 Cover  
 Maximum 20  
 9
3) **CHANNEL MORPHOLOGY** Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]
<input checked="" type="checkbox"/> MODERATE [3]	<input checked="" type="checkbox"/> GOOD [5]	<input checked="" type="checkbox"/> RECOVERED [4]	<input checked="" type="checkbox"/> MODERATE [2]
<input type="checkbox"/> LOW [2]	<input type="checkbox"/> FAIR [3]	<input type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]	

Comments

 Channel  
 Maximum 20  
 14
4) **BANK EROSION AND RIPARIAN ZONE** Check ONE in each category for EACH BANK (Or 2 per bank & average)

EROSION	RIPARIAN WIDTH	FLOOD PLAIN QUALITY	CONSERVATION TILLAGE
<input type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]	<input checked="" type="checkbox"/> URBAN OR INDUSTRIAL [0]
<input type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input type="checkbox"/> MINING / CONSTRUCTION [0]
<input checked="" type="checkbox"/> HEAVY / SEVERE [1]	<input checked="" type="checkbox"/> NARROW 5-10m [2]	<input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	
	<input checked="" type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]	
	<input type="checkbox"/> NONE [0]	<input checked="" type="checkbox"/> OPEN PASTURE, ROWCROP [0]	

 Indicate predominant land use(s)  
 past 100m riparian.

Comments

 Riparian  
 Maximum 10  
 2
5) **POOL / GLIDE AND RIFFLE / RUN QUALITY**

MAXIMUM DEPTH

CHANNEL WIDTH

CURRENT VELOCITY

Check ONE (ONLY!)

Check ONE (Or 2 &amp; average)

Check ALL that apply

☐ > 1m [6]  
☒ 0.7-<1m [4]  
☐ 0.4-<0.7m [2]  
☐ 0.2-<0.4m [1]  
☐ < 0.2m [0]

☒ POOL WIDTH > RIFFLE WIDTH [2]  
☐ POOL WIDTH = RIFFLE WIDTH [1]  
☐ POOL WIDTH < RIFFLE WIDTH [0]

☐ TORRENTIAL [-1]  
☐ SLOW [1]  
☐ VERY FAST [1]  
☒ FAST [1]  
☐ INTERSTITIAL [-1]  
☐ INTERMITTENT [-2]  
☐ MODERATE [1]  
☐ EDDIES [1]

Indicate for reach - pools and riffles.

 Recreation Potential  
 Primary Contact  
 Secondary Contact  
 (circle one and comment on back)

Comments

 Pool /  
 Current  
 Maximum 12  
 7

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 &amp; average).

☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input type="checkbox"/> BEST AREAS 5-10cm [1]	<input checked="" type="checkbox"/> MAXIMUM < 50cm [1]	<input checked="" type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input checked="" type="checkbox"/> LOW [1]
<input checked="" type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input type="checkbox"/> MODERATE [0]
			<input type="checkbox"/> EXTENSIVE [-1]

Comments

 Riffle /  
 Run  
 Maximum 8  
 3
6) **GRADIENT**

DRAINAGE AREA

ft/mi)

☐ VERY LOW - LOW [2-4]☐ MODERATE [6-10]☒ HIGH - VERY HIGH [10-6]

%POOL: 0

%GLIDE: 0

%RUN: 60

%RIFFLE: 40

 Gradient  
 Maximum 10  
 8



**AJ SAMPLED REACH**

Check ALL that apply

**METHOD**

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

**STAGE**

- 1st-sample pass- 2nd  
☐ HIGH ☐  
☐ UP ☐  
☒ NORMAL ☒  
☐ LOW ☐  
☐ DRY ☐

**DISTANCE**

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☐ OTHER

**CLARITY**

- 1st --sample pass-- 2nd  
☐ < 20 cm ☐  
☐ 20-<40 cm ☐  
☐ 40-70 cm ☐  
☒ > 70 cm/ CTB ☒  
☐ SECCHI DEPTH ☐

meters

**CANOPY**

- ☐ > 85%- OPEN  
☐ 55%-<85%  
☐ 30%-<55%  
☐ 10%-<30%  
☐ <10%- CLOSED

**CJ RECREATION**

AREA DEPTH  
POOL: ☐ >100ft<sup>2</sup> ☐ >3ft

**BJ AESTHETICS**

- ☐ NUISANCE ALGAE  
☐ INVASIVE MACROPHYTES  
☐ EXCESS TURBIDITY  
☐ DISCOLORATION  
☐ FOAM / SCUM  
☐ OIL SHEEN  
☐ TRASH / LITTER  
☐ NUISANCE ODOR  
☐ SLUDGE DEPOSITS  
☐ CSOs/SSOs/OUTFALLS

**DJ MAINTENANCE**

- PUBLIC / ~~PRIVATE~~ / BOTH / NA  
 ACTIVE / ~~HISTORIC~~ / BOTH / NA  
 YOUNG-SUCCESSION-OLD  
 SPRAY / SNAG / REMOVED  
 MODIFIED / DIPPED OUT / NA  
 LEVEED / ONE SIDED  
 RELOCATED / CUTOFFS  
☒ MOVING BEDLOAD-STABLE  
 ARMoured / SLUMPS  
 ISLANDS / SCoured  
 IMPOUNDED / DESICCATED  
 FLOOD CONTROL / DRAINAGE

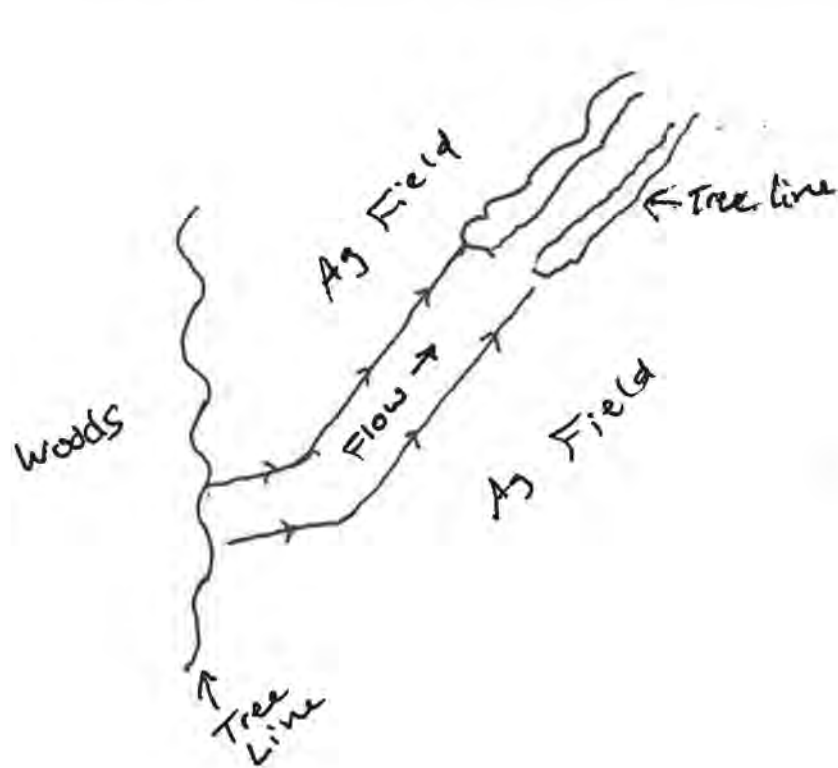
Circle some &amp; COMMENT

**EJ ISSUES**

- WWTP / CSO / NPDES / INDUSTRY  
 HARDENED / URBAN / DIRT&GRIME  
 CONTAMINATED / LANDFILL  
 BMPs-CONSTRUCTION-SEDIMENT  
 LOGGING / IRRIGATION / COOLING  
 BANK / ~~EROSION~~ / SURFACE  
 FALSE BANK / MANURE / LAGOON  
 WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE  
 ACID / MINE / QUARRY / FLOW  
 NATURAL / WETLAND / STAGNANT  
 PARK / GOLF / LAWN / HOME  
 ATMOSPHERE / DATA PAUCITY

**FJ MEASUREMENTS**

- $\bar{x}$  width  
 $\bar{x}$  depth  
 max. depth  
 $\bar{x}$  bankfull width  
 bankfull  $\bar{x}$  depth  
 W/D ratio  
 bankfull max. depth  
 floodprone  $x^2$  width  
 entrench. ratio  
 Legacy Tree:

**Stream Drawing:**



SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. MillersportSITE NUMBER ST-2-PER

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.53LENGTH OF STREAM REACH (ft) 75LAT. 39.82879LONG. -82.59313

RIVER CODE

RIVER MILE

DATE 03/27/24SCORER E.Holt

COMMENTS

**NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions****STREAM CHANNEL MODIFICATIONS:**☐ NONE / NATURAL CHANNEL☐ RECOVERED☒ RECOVERING☐ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input checked="" type="checkbox"/> SILT [3 pt]	<u>100%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>0%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>0%</u>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>0%</u>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>0%</u>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>0%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>0%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0.00%

(A)

100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3TOTAL NUMBER OF SUBSTRATE TYPES: 1**HHEI Metric Points**Substrate  
Max = 404

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input checked="" type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

Pool Depth  
Max = 3020

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS

AVERAGE BANKFULL WIDTH (meters):

Bankfull  
Width  
Max=3030

This information must also be completed

**RIPARIAN ZONE AND FLOODPLAIN QUALITY**

☆NOTE: River Left (L) and Right (R) as looking downstream☆

**RIPARIAN WIDTH**

L	R	(Per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Narrow <5m
<input type="checkbox"/>	<input type="checkbox"/>	None

COMMENTS

**FLOODPLAIN QUALITY**

L	R	(Most Predominant per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field
<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

**FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

**SINUOSITY** (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

**STREAM GRADIENT ESTIMATE**
☒ Flat (0.5 ft/100 ft)
 ☐ Flat to Moderate
 ☐ Moderate (2 ft/100 ft)
 ☐ Moderate to Severe
 ☐ Severe (10 ft/100 ft)



**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input type="checkbox"/> WWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name: Baltimore NRCS Soil Map Page: 2 NRCS Soil Map Stream Order   
County: Fairfield Township / City: Baltimore**MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: 03/26/24 Quantity: 0.03Photograph Information: Elevated Turbidity? (Y/N): ☒ N Canopy (% open): 100%Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N): ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ Y (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N)	<input checked="" type="checkbox"/> Y	Voucher? (Y/N)	<input checked="" type="checkbox"/> Y	Salamanders Observed? (Y/N)	<input checked="" type="checkbox"/> Y	Voucher? (Y/N)	<input checked="" type="checkbox"/> Y
Frogs or Tadpoles Observed? (Y/N)	<input checked="" type="checkbox"/> Y	Voucher? (Y/N)	<input checked="" type="checkbox"/> Y	Aquatic Macroinvertebrates Observed? (Y/N)	<input checked="" type="checkbox"/> Y	Voucher? (Y/N)	<input checked="" type="checkbox"/> Y

Comments Regarding Biology: **DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Flow →

Ag Field

↑  
N

FLOW →

Ag Field





## Primary Headwater Habitat Evaluation Form

52

HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**SITE NUMBER **ST-68-INT**RIVER BASIN **Walnut Creek**DRAINAGE AREA (mi<sup>2</sup>) **0.38**LENGTH OF STREAM REACH (ft) **210**LAT. **39.82183**LONG. **-82.59785**RIVER CODE **EPH**RIVER MILE **N/A**DATE **03/27/24**SCORER **L. Vine**

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☒ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> SILT [3 pt]	<input type="text" value="30%"/>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="10%"/>	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="40%"/>	<input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="20%"/>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock **10.00%**

(A)

Substrate Percentage  
Check **100%**

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

**3**

TOTAL NUMBER OF SUBSTRATE TYPES:

**4**HHEI  
Metric  
PointsSubstrate  
Max = 40**7**

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth  
Max = 30**30**

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

**20**

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

Bankfull  
Width  
Max=30**15**

COMMENTS

AVERAGE BANKFULL WIDTH (meters):

**2.00**

## This information must also be completed

## RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream ☆

## RIPARIAN WIDTH

L	R	(Per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None

COMMENTS

## FLOODPLAIN QUALITY

L	R	(Most Predominant per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field
<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

FLOW REGIME (At Time of Evaluation) (Check *ONLY* one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input checked="" type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

## STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

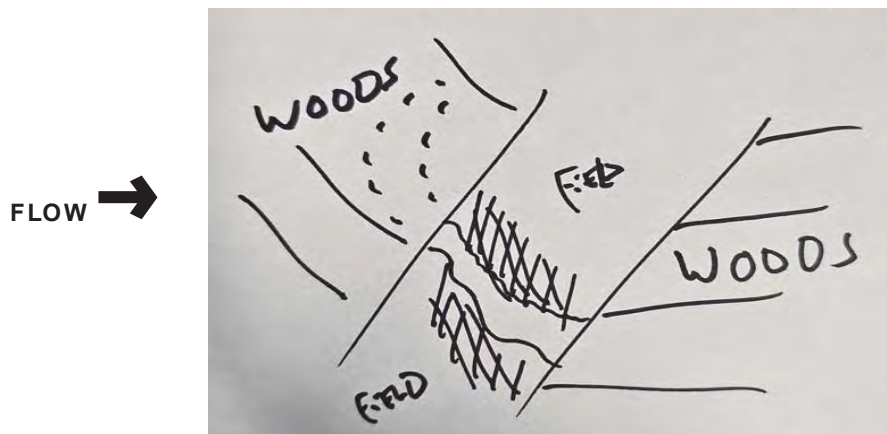


**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input checked="" type="checkbox"/> WWH Name: <b>Walnut Creek</b>	Distance from Evaluated Stream	<b>0.69</b>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name: **Baltimore** NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: **Fairfield** Township / City: **Baltimore****MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: **03/26/24** Quantity: **0.03**  
Photograph Information:   
Elevated Turbidity? (Y/N): ☒ Y Canopy (% open): **100%**  
Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number:   
Field Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm)   
Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  
Fish Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Salamanders Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Frogs or Tadpoles Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Aquatic Macroinvertebrates Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Comments Regarding Biology: **DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







# Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) :

37

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**

SITE NUMBER **ST-63-INT**

RIVER BASIN **Walnut Creek**

DRAINAGE AREA (mi<sup>2</sup>) **0.00**

LENGTH OF STREAM REACH (ft) **153**

LAT. **39.81450**

LONG. **-82.60525**

RIVER CODE **EPH**

RIVER MILE **N/A**

DATE **03/27/24**

SCORER **L. Vine**

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

## STREAM CHANNEL MODIFICATIONS:

☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☒ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input checked="" type="checkbox"/> SILT [3 pt]	<input type="text" value="100%"/>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%**

(A)

Substrate Percentage Check **100%**

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **6**

TOTAL NUMBER OF SUBSTRATE TYPES: **1**

## HHEI Metric Points

Substrate Max = 40

7

A + B

Pool Depth Max = 30

15

Bankfull Width Max=30

15

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

MAXIMUM POOL DEPTH (centimeters): **20**

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS

AVERAGE BANKFULL WIDTH (meters): **2.00**

This information must also be completed

## RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream ☆

### RIPARIAN WIDTH

L	R	(Per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None

COMMENTS

### FLOODPLAIN QUALITY

L	R	(Most Predominant per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field
<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

## FLOW REGIME (At Time of Evaluation) (Check *ONLY* one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

## SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input checked="" type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

## STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)



**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input checked="" type="checkbox"/> WWH Name: <b>Walnut Creek</b>	Distance from Evaluated Stream	<b>0.69</b>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**

USGS Quadrangle Name: **Baltimore** NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: **Fairfield** Township / City: **Baltimore**

**MISCELLANEOUS**

Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: **03/26/24** Quantity: **0.03**  
Photograph Information:   
Elevated Turbidity? (Y/N): ☒ Y Canopy (% open): **100%**  
Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number:   
Field Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm)   
Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain:

Additional comments/description of pollution impacts:

**BIOTIC EVALUATION**

Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  
Fish Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Salamanders Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Frogs or Tadpoles Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Aquatic Macroinvertebrates Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Comments Regarding Biology:

**DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW 



SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. MillersportSITE NUMBER ST-55-INT

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.24LENGTH OF STREAM REACH (ft) 145LAT. 39.80056LONG. -82.61736

RIVER CODE

RIVER MILE

DATE 03/27/24

SCORER

Nathan Barry

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:☐ NONE / NATURAL CHANNEL☐ RECOVERED☒ RECOVERING☐ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input type="checkbox"/> SILT [3 pt]	<u>0%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>0%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>0%</u>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>5%</u>	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>60%</u>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>15%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input checked="" type="checkbox"/> SAND (<2 mm) [6 pts]	<u>20%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock 5.00%

(A)

Substrate Percentage  
Cher 100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6TOTAL NUMBER OF SUBSTRATE TYPES: 4HHEI  
Metric  
PointsSubstrate  
Max = 40

10

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth  
Max = 30

25

COMMENTS \_\_\_\_\_ MAXIMUM POOL DEPTH (centimeters): 15

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

Bankfull  
Width  
Max=30

30

COMMENTS \_\_\_\_\_ AVERAGE BANKFULL WIDTH (meters): 6.67

This information must also be completed

## RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)		Conservation Tillage	
Wide >10m		Mature Forest, Wetland		Urban or Industrial	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		Open Pasture, Row Crop	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Mining or Construction	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
None		Fenced Pasture			

COMMENTS \_\_\_\_\_

- FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS \_\_\_\_\_

- SINUOSITY** (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

## STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

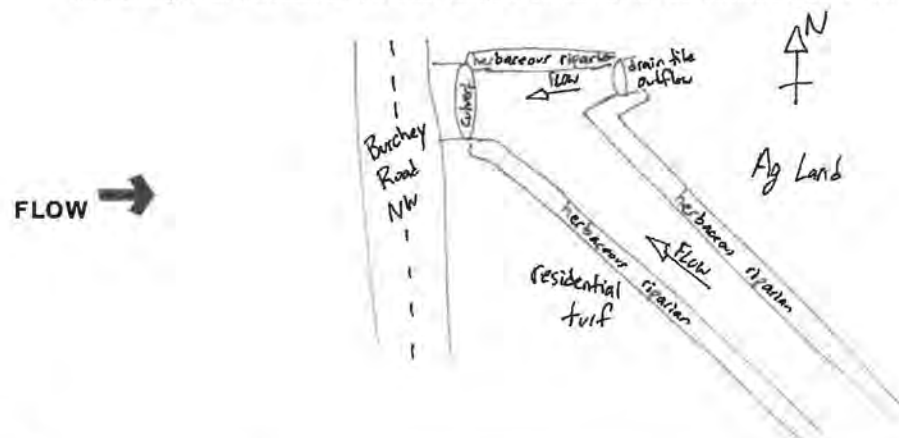


**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order:   
County: Fairfield Township / City: Lancaster**MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: 03/26/24 Quantity: 0.30Photograph Information: Elevated Turbidity? (Y/N): ☒ N Canopy (% open): 0%Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number: N/AField Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)Fish Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Salamanders Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Frogs or Tadpoles Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Aquatic Macroinvertebrates Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ NComments Regarding Biology: Not assessed**DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. MillersportSITE NUMBER ST-53-INT

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.30LENGTH OF STREAM REACH (ft) 170LAT. 39.79897LONG. -82.61860

RIVER CODE

RIVER MILE

DATE 03/27/24SCORER Nathan Barnes

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:☐ NONE / NATURAL CHANNEL ☒ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

- 1.
- SUBSTRATE**
- (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input type="checkbox"/> SILT [3 pt]	<u>0%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>0%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>0%</u>
<input checked="" type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>30%</u>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>0%</u>
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>40%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>30%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock 30.00%

(A)

Substrate Percentages  
Checked: 100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21TOTAL NUMBER OF SUBSTRATE TYPES: 3HHEI  
Metric  
PointsSubstrate  
Max = 40

24

A + B

- 2.
- Maximum Pool Depth**
- (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth  
Max = 30

25

COMMENTS

MAXIMUM POOL DEPTH (centimeters): 15

- 3.
- BANK FULL WIDTH**
- (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input checked="" type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

Bankfull  
Width  
Max=30

30

COMMENTS

AVERAGE BANKFULL WIDTH (meters): 5.00

## This information must also be completed

## RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

## RIPARIAN WIDTH

L	R	(Per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Narrow <5m
<input type="checkbox"/>	<input type="checkbox"/>	None

COMMENTS:

## FLOODPLAIN QUALITY

L	R	(Most Predominant per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

## FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS:

## SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

## STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)



**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

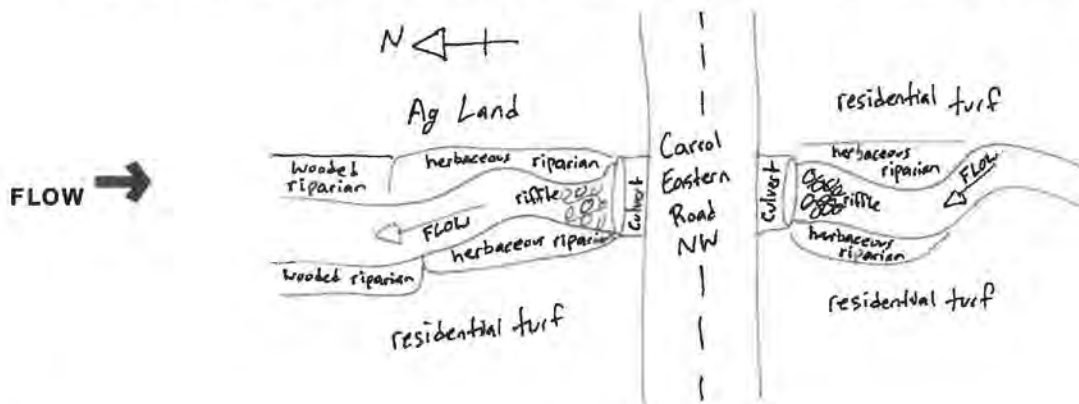
<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: Fairfield Township / City: Lancaster**MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: 03/26/24 Quantity: 0.30Photograph Information: Elevated Turbidity? (Y/N): ☒ N Canopy (% open): 100%Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number: N/AField Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N	Salamanders Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N
Frogs or Tadpoles Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N	Aquatic Macroinvertebrates Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N

Comments Regarding Biology: **DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. MillersportSITE NUMBER ST-48-EPH

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.27LENGTH OF STREAM REACH (ft) 115LAT. 39.78862LONG. -82.62272

RIVER CODE

RIVER MILE

DATE 03/27/24SCORER Nathan Barn

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:☒ NONE / NATURAL CHANNEL☐ RECOVERED☐ RECOVERING☐ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input checked="" type="checkbox"/> SILT [3 pt]	<u>35%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>5%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>10%</u>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>0%</u>	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>50%</u>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>0%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>0%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock 0.00%

(A)

Substrate Percentages  
Check 100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

3

TOTAL NUMBER OF SUBSTRATE TYPES:

4

HHEI  
Metric  
PointsSubstrate  
Max = 40

7

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth  
Max = 30

25

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

15

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

Bankfull  
Width  
Max=30

5

COMMENTS

AVERAGE BANKFULL WIDTH (meters):

0.33

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)			
<input type="checkbox"/> Wide >10m		<input type="checkbox"/> Mature Forest, Wetland		<input type="checkbox"/> Conservation Tillage	
<input checked="" type="checkbox"/> Moderate 5-10m		<input checked="" type="checkbox"/> Immature Forest, Shrub or Old Field		<input type="checkbox"/> Urban or Industrial	
<input checked="" type="checkbox"/> Narrow <5m		<input type="checkbox"/> Residential, Park, New Field		<input type="checkbox"/> Open Pasture, Row Crop	
<input type="checkbox"/> None		<input type="checkbox"/> Fenced Pasture		<input type="checkbox"/> Mining or Construction	

COMMENTS

- FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

- SINUOSITY** (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

**STREAM GRADIENT ESTIMATE**
☐ Flat (0.5 ft/100 ft)
 ☒ Flat to Moderate
 ☐ Moderate (2 ft/100 ft)
 ☐ Moderate to Severe
 ☐ Severe (10 ft/100 ft)



**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

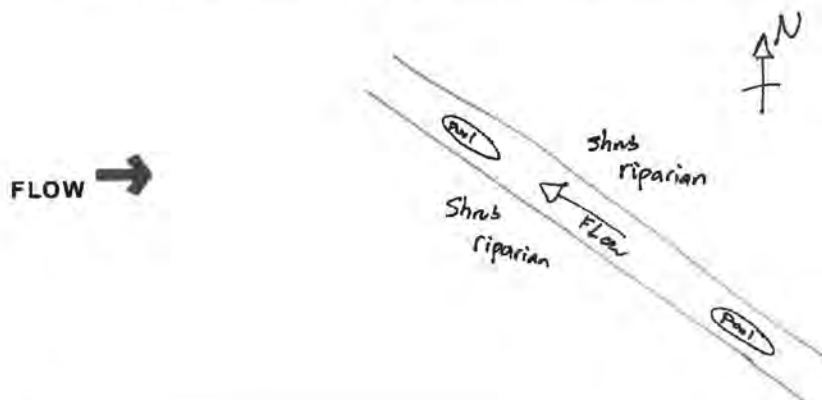
<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: Fairfield Township / City: Lancaster**MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: 03/26/24 Quantity: 0.30Photograph Information: Elevated Turbidity? (Y/N): ☒ N Canopy (% open): 100%Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number: N/AField Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N	Salamanders Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N
Frogs or Tadpoles Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N	Aquatic Macroinvertebrates Observed? (Y/N)	<input checked="" type="checkbox"/> N	Voucher? (Y/N)	<input checked="" type="checkbox"/> N

Comments Regarding Biology: **No biotic evaluation conducted****DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. MillersportSITE NUMBER ST-44-INT

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.15LENGTH OF STREAM REACH (ft) 100LAT. 39.78067LONG. -82.62624

RIVER CODE

RIVER MILE

DATE 03/27/24

SCORER

Nathan Barry

COMMENTS

**NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions****STREAM CHANNEL MODIFICATIONS:**☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<u>0%</u>	<input type="checkbox"/> SILT [3 pt]	<u>10%</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<u>0%</u>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>0%</u>
<input type="checkbox"/> BEDROCK [16 pt]	<u>0%</u>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<u>0%</u>
<input checked="" type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>30%</u>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	<u>0%</u>
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>30%</u>	<input type="checkbox"/> MUCK [0 pts]	<u>0%</u>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>30%</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<u>0%</u>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 30.00%

(A)

100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21TOTAL NUMBER OF SUBSTRATE TYPES: 4**HHEI Metric Points**Substrate  
Max = 4025

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

MAXIMUM POOL DEPTH (centimeters): 8Pool Depth  
Max = 3015

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS

AVERAGE BANKFULL WIDTH (meters): 1.20Bankfull  
Width  
Max=3015**This information must also be completed****RIPARIAN ZONE AND FLOODPLAIN QUALITY**

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN ZONE WIDTH		FLOODPLAIN QUALITY			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)		Conservation Tillage	
Wide >10m		Mature Forest, Wetland		Urban or Industrial	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate 5-10m		Immature Forest, Shrub or Old Field		Open Pasture, Row Crop	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrow <5m		Residential, Park, New Field		Mining or Construction	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
None		Fenced Pasture			

COMMENTS

- FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

- SINUOSITY** (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

**STREAM GRADIENT ESTIMATE**☒ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

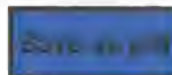
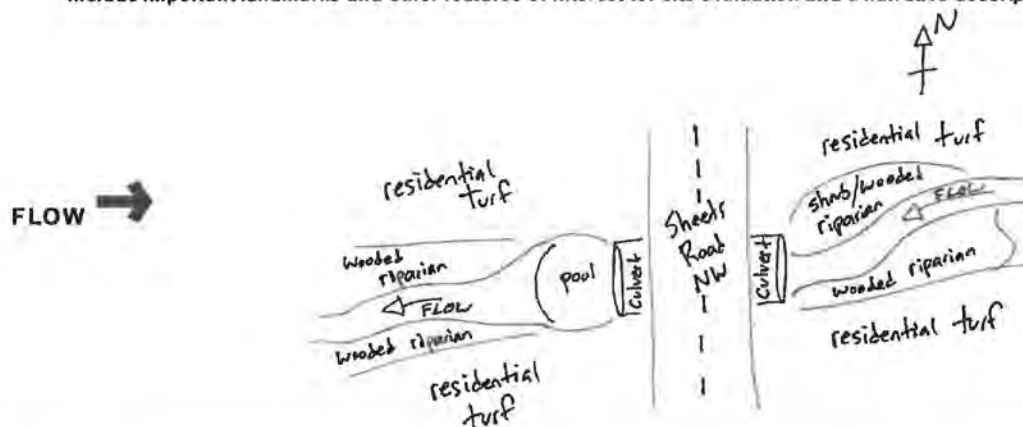


**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input type="checkbox"/> WWH Name: <input type="text"/>	Distance from Evaluated Stream: <input type="text"/>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream: <input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream: <input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order:   
County: Fairfield Township / City: Lancaster**MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: 03/26/24 Quantity: 0.30Photograph Information: Elevated Turbidity? (Y/N): ☒ N Canopy (% open): 90%Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number: N/AField Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)Fish Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Salamanders Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Frogs or Tadpoles Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Aquatic Macroinvertebrates Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ NComments Regarding Biology: **No biotic evaluation conducted****DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







## Primary Headwater Habitat Evaluation Form

27

HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**SITE NUMBER **ST-44-EPH**RIVER BASIN **Hocking**DRAINAGE AREA (mi<sup>2</sup>) **0.32**LENGTH OF STREAM REACH (ft) **221**LAT. **39.77551**LONG. **-82.62766**RIVER CODE **EPH**RIVER MILE **N/A**DATE **03/27/24**SCORER **L. Vine**

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:☐ NONE / NATURAL CHANNEL☐ RECOVERED☐ RECOVERING☒ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input checked="" type="checkbox"/> SILT [3 pt]	<input type="text" value="100%"/>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock **0.00%**

(A)

Substrate Percentage  
Check **100%**

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **6**TOTAL NUMBER OF SUBSTRATE TYPES: **1**HHEI  
Metric  
PointsSubstrate  
Max = 40

7

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth  
Max = 30

15

COMMENTS

MAXIMUM POOL DEPTH (centimeters): **20**

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

Bankfull  
Width  
Max=30

5

COMMENTS

AVERAGE BANKFULL WIDTH (meters): **2.00**

## This information must also be completed

## RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream ☆

## RIPARIAN WIDTH

L	R	(Per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None

COMMENTS

## FLOODPLAIN QUALITY

L	R	(Most Predominant per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

FLOW REGIME (At Time of Evaluation) (Check *ONLY* one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

## STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☒ Moderate to Severe ☐ Severe (10 ft/100 ft)

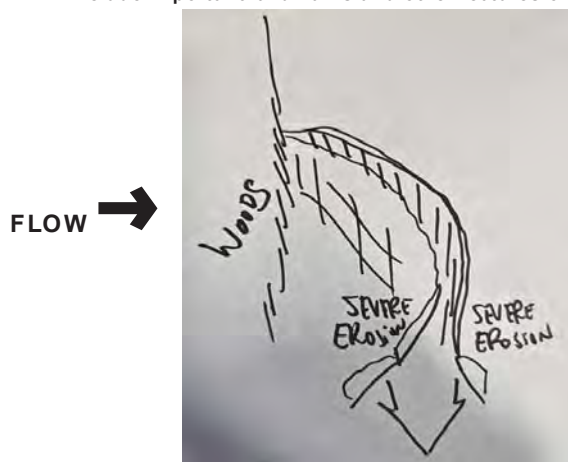


**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input checked="" type="checkbox"/> WWH Name: <b>Hocking River</b>	Distance from Evaluated Stream	<b>2.50</b>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name: **Carroll** NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: **Fairfield** Township / City: **Dumontville****MISCELLANEOUS**Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **03/26/24** Quantity: **0.03**  
Photograph Information:   
Elevated Turbidity? (Y/N): **Y** Canopy (% open): **0%**  
Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number:   
Field Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm)   
Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**  
Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**  
Comments Regarding Biology: **DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







# Primary Headwater Habitat Evaluation Form

**63****HHEI Score (sum of metrics 1, 2, 3) :**

SITE NAME/LOCATION **W. Lancaster - S. Baltimore - W. Millersport**

SITE NUMBER **ST-42-INT** RIVER BASIN **Hocking** DRAINAGE AREA (mi<sup>2</sup>) **0.68**

LENGTH OF STREAM REACH (ft) **241** LAT. **39.77506** LONG. **-82.62789** RIVER CODE **INT** RIVER MILE **<1**

DATE **03/27/24** SCORER **L. Vine** COMMENTS

**NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions**

**STREAM CHANNEL MODIFICATIONS:** ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☒ RECENT OR NO RECOVERY

- 1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.**

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> SILT [3 pt]	<input type="text" value="30%"/>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="40%"/>	<input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input checked="" type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="30%"/>	<input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%**

**(A)**

Substrate Percentage Check **100%**

**(B)**

**SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15**

**TOTAL NUMBER OF SUBSTRATE TYPES: 3**

**HHEI Metric Points**

Substrate Max = 40

**18**

A + B

- 2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):**

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS MAXIMUM POOL DEPTH (centimeters): **20**

Pool Depth Max = 30

**25**

- 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):**

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS AVERAGE BANKFULL WIDTH (meters): **2.00**

Bankfull Width Max=30

**20**

**This information must also be completed**

**RIPARIAN ZONE AND FLOODPLAIN QUALITY**

☆NOTE: River Left (L) and Right (R) as looking downstream ☆

**RIPARIAN WIDTH**

L	R	(Per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Narrow <5m
<input type="checkbox"/>	<input type="checkbox"/>	None

COMMENTS

**FLOODPLAIN QUALITY**

L	R	(Most Predominant per Bank)
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

**FLOW REGIME (At Time of Evaluation) (Check ONLY one box):**

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

**SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):**

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

**STREAM GRADIENT ESTIMATE**

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☒ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)



**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input checked="" type="checkbox"/> WWH Name: <b>Hocking River</b>	Distance from Evaluated Stream	<b>2.50</b>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**

USGS Quadrangle Name: **Carroll** NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: **Fairfield** Township / City: **Dumontville**

**MISCELLANEOUS**

Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: **03/26/24** Quantity: **0.03**  
Photograph Information:   
Elevated Turbidity? (Y/N): ☒ Y Canopy (% open): **0%**  
Were samples collected for water chemistry? (Y/N): ☒ N (Note lab sample no. or id. and attach results) Lab Number:   
Field Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm)   
Is the sampling reach representative of the stream (Y/N) ☒ Y If not, please explain:

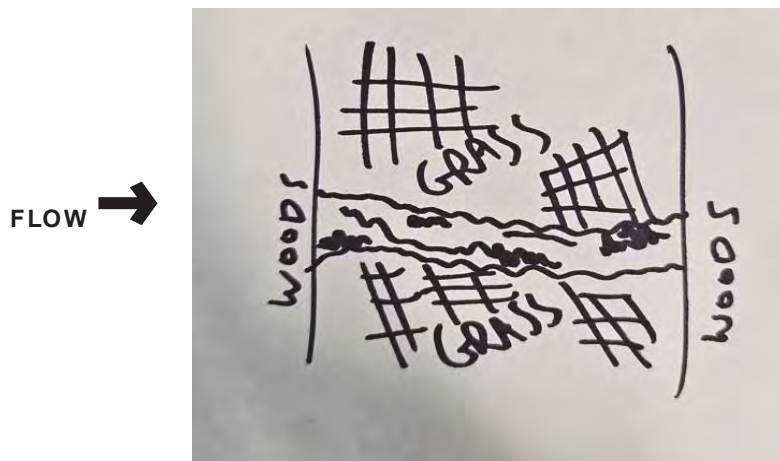
Additional comments/description of pollution impacts:

**BIOTIC EVALUATION**

Performed? (Y/N): ☒ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)  
Fish Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Salamanders Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Frogs or Tadpoles Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N Aquatic Macroinvertebrates Observed? (Y/N) ☒ N Voucher? (Y/N) ☒ N  
Comments Regarding Biology:

**DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Stream &amp; Location: W. Lancaster - S. Baltimore - W. Millersport

RM: Date: 3 / 28 / 24

Hocking River

Scorers Full Name &amp; Affiliation: V3 Companies - Nathan Barnett

River Code: STORET #: Lat./ Long.: 39 . 72957 182 . 63418 Office verified location ☐1] SUBSTRATE Check ONLY Two substrate TYPE BOXES;  
estimate % or note every type present

Check ONE (Or 2 &amp; average)

BEST TYPES	POOL RIFFLE	OTHER TYPES	POOL RIFFLE
<input type="checkbox"/> BLDR / SLABS [10]		<input type="checkbox"/> HARDPAN [4]	10
<input type="checkbox"/> BOULDER [9]		<input type="checkbox"/> DETRITUS [3]	
<input checked="" type="checkbox"/> COBBLE [8]	5 20	<input type="checkbox"/> MUCK [2]	
<input type="checkbox"/> GRAVEL [7]	20	<input type="checkbox"/> SILT [2]	25
<input checked="" type="checkbox"/> SAND [6]	80 60	<input type="checkbox"/> ARTIFICIAL [0]	
<input type="checkbox"/> BEDROCK [5]			

(Score natural substrates; ignore

NUMBER OF BEST TYPES: ☐ 4 or more [2] sludge from point-sources)

Comments

☒ 3 or less [0]

ORIGIN

☒ LIMESTONE [1]

☒ TILLS [1]

☐ WETLANDS [0]

☐ HARDPAN [0]

☐ SANDSTONE [0]

☐ RIP/RAP [0]

☐ LACUSTURINE [0]

☐ SHALE [-1]

☐ COAL FINES [-2]

QUALITY

☐ HEAVY [-2]

☒ MODERATE [-1]

☐ NORMAL [0]

☐ FREE [1]

☒ EXTENSIVE [-2]

☒ MODERATE [-1]

☐ NORMAL [0]

☐ NONE [1]

Substrate

13

Maximum 20

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

Check ONE (Or 2 &amp; average)

1 UNDERCUT BANKS [1]	2 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]
1 OVERHANGING VEGETATION [1]	1 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]
0 SHALLOWS (IN SLOW WATER) [1]	0 BOULDERS [1]	0 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT

☐ EXTENSIVE >75% [11]

☐ MODERATE 25-75% [7]

☐ SPARSE 5-25% [3]

☒ NEARLY ABSENT <5% [1]

Comments

Cover

Maximum 20

9

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 &amp; average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input checked="" type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]
<input type="checkbox"/> MODERATE [3]	<input type="checkbox"/> GOOD [5]	<input type="checkbox"/> RECOVERED [4]	<input checked="" type="checkbox"/> MODERATE [2]
<input checked="" type="checkbox"/> LOW [2]	<input checked="" type="checkbox"/> FAIR [3]	<input type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]	

Comments

Channel

Maximum 20

13

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank &amp; average)

EROSION	RIPARIAN WIDTH	FLOOD PLAIN QUALITY
<input checked="" type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]
<input type="checkbox"/> MODERATE [2]	<input checked="" type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]
<input type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input checked="" type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]
	<input checked="" type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]
	<input type="checkbox"/> NONE [0]	<input checked="" type="checkbox"/> OPEN PASTURE, ROWCROP [0]

Indicate predominant land use(s)  
past 100m riparian.

Comments

Riparian

Maximum 10

6.5

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check ONE (ONLY!)

☐ > 1m [6]

☒ 0.7-1m [4]

☐ 0.4-0.7m [2]

☐ 0.2-0.4m [1]

☐ < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 &amp; average)

☒ POOL WIDTH > RIFFLE WIDTH [2]

☐ POOL WIDTH = RIFFLE WIDTH [1]

☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply

☐ TORRENTIAL [-1]

☐ SLOW [1]

☐ VERY FAST [1]

☐ INTERSTITIAL [-1]

☐ FAST [1]

☐ INTERMITTENT [-2]

☒ MODERATE [1]

☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Comments

Pool / Current

Maximum 12

7

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 &amp; average).

☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input checked="" type="checkbox"/> MAXIMUM > 50cm [2]	<input checked="" type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input checked="" type="checkbox"/> BEST AREAS 5-10cm [1]	<input type="checkbox"/> MAXIMUM < 50cm [1]	<input type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input checked="" type="checkbox"/> MODERATE [0]
			<input type="checkbox"/> EXTENSIVE [-1]

Comments

Riffle / Run

Maximum 8

5

6] GRADIENT (

DRAINAGE AREA

( 29 mi<sup>2</sup>)

☒ VERY LOW - LOW [2-4]

☐ MODERATE [6-10]

☐ HIGH - VERY HIGH [10-6]

%POOL: 30

%GLIDE: 0

%RUN: 60

%RIFFLE: 10

Gradient

Maximum 10

3



**A) SAMPLED REACH**

Check ALL that apply

**METHOD**

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

**STAGE**

- 1st -sample pass- 2nd  
☐ HIGH ☐  
☐ UP ☐  
☒ NORMAL ☒  
☐ LOW ☐  
☐ DRY ☐

**DISTANCE**

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☒ OTHER

100  
meters

**CANOPY**

- ☐ > 85%- OPEN  
☒ 55%-<85%  
☐ 30%-<55%  
☐ 10%-<30%  
☐ <10%- CLOSED

**CLARITY**

- 1st --sample pass-- 2nd  
☐ < 20 cm ☐  
☐ 20-<40 cm ☐  
☒ 40-70 cm ☒  
☐ > 70 cm/ CTB ☐  
☐ SECCHI DEPTH ☐

**C) RECREATION**

AREA DEPTH  
POOL: ☐ >100R<sup>2</sup> ☐ >3ft

**B) AESTHETICS**

- ☐ NUISANCE ALGAE  
☐ INVASIVE MACROPHYTES  
☐ EXCESS TURBIDITY  
☐ DISCOLORATION  
☐ FOAM / SCUM  
☐ OIL SHEEN  
☐ TRASH / LITTER  
☐ NUISANCE ODOR  
☐ SLUDGE DEPOSITS  
☐ CSOs/SSOs/OUTFALLS

**D) MAINTENANCE**

- PUBLIC / PRIVATE / BOTH / NA  
 ACTIVE / HISTORIC / BOTH / NA  
 YOUNG-SUCCESSION-OLD  
 SPRAY / SNAG / REMOVED  
 MODIFIED / DIPPED OUT / NA  
 LEVEED / ONE SIDED  
 RELOCATED / CUTOFFS  
 MOVING BEDLOAD-STABLE  
 ARMoured / SLUMPS  
 ISLANDS / SCoured  
 IMPOUNDED / DESICCATED  
 FLOOD CONTROL / DRAINAGE

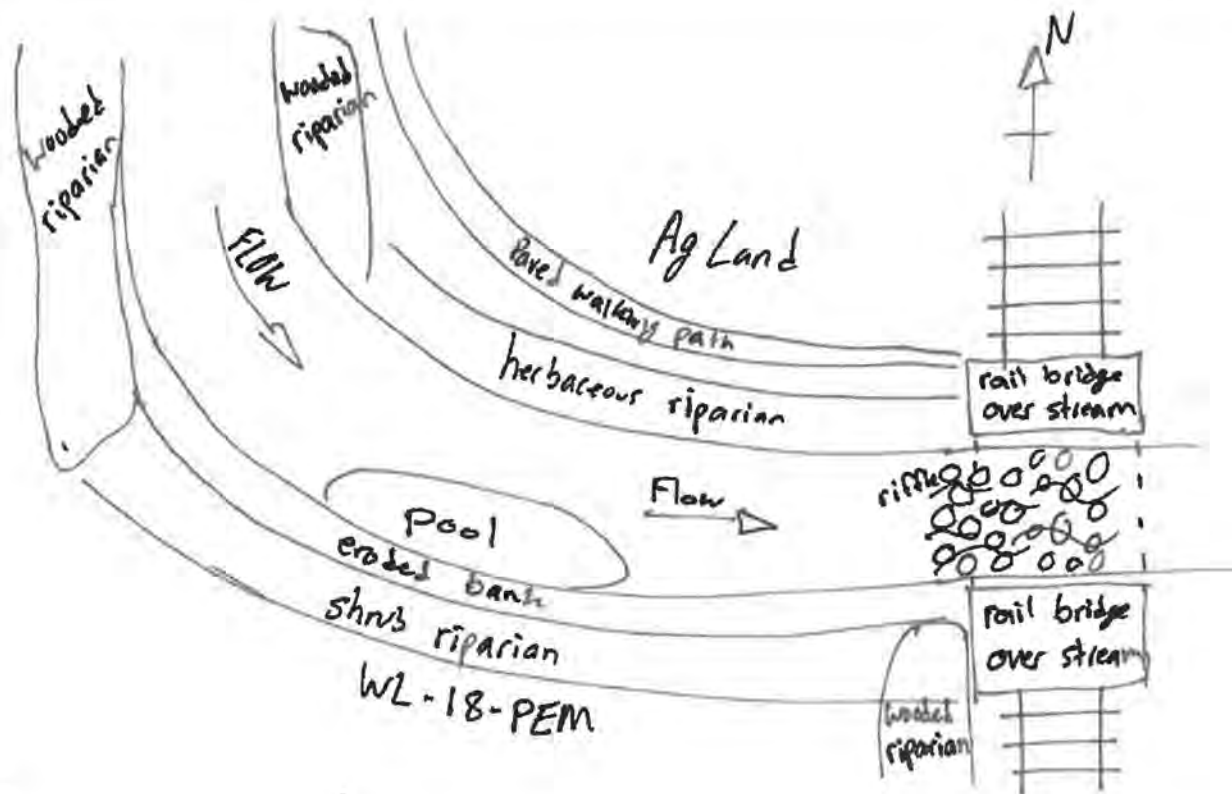
Circle some &amp; COMMENT

**E) ISSUES**

- WWTP / CSO / NPDES / INDUSTRY  
 HARDENED / URBAN / DIRT&GRIME  
 CONTAMINATED / LANDFILL  
 BMPs-CONSTRUCTION-SEDIMENT  
 LOGGING / IRRIGATION / COOLING  
BANK / EROSION SURFACE  
 FALSE BANK / MANURE / LAGOON  
 WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE  
 ACID / MINE / QUARRY / FLOW  
 NATURAL / WETLAND / STAGNANT  
 PARK / GOLF / LAWN / HOME  
 ATMOSPHERE / DATA PAUCITY

**F) MEASUREMENTS**

- $\bar{x}$  width  
 $\bar{x}$  depth  
 max. depth  
 $\bar{x}$  bankfull width  
 bankfull  $\bar{x}$  depth  
 W/D ratio  
 bankfull max. depth  
 floodprone  $\bar{x}^2$  width  
 entrench. ratio  
 Legacy Tree:

**Stream Drawing:**



Stream &amp; Location: W. Lancaster - S. Baltimore - W. Millersport

RM: \_\_\_\_\_ Date: 3 / 28 / 24

ST-14-PER

Scorers Full Name &amp; Affiliation: V3 Companies - Nathan Barnett

River Code: \_\_\_\_\_ STORET #: \_\_\_\_\_ Lat./Long.: 39 . 72526 182 . 63249 Office verified location ☐1) **SUBSTRATE** Check ONLY Two substrate TYPE BOXES;  
estimate % or note every type present

Check ONE (Or 2 &amp; average)

BEST TYPES	POOL RIFFLE	OTHER TYPES	POOL RIFFLE
<input type="checkbox"/> BLDR / SLABS [10]	_____	<input type="checkbox"/> HARDPAN [4]	_____ 5
<input type="checkbox"/> BOULDER [9]	_____	<input type="checkbox"/> DETRITUS [3]	_____
<input checked="" type="checkbox"/> COBBLE [8]	_____ 30	<input type="checkbox"/> MUCK [2]	_____
<input checked="" type="checkbox"/> GRAVEL [7]	_____ 30	<input type="checkbox"/> SILT [2]	_____ 10
<input type="checkbox"/> SAND [6]	_____ 25	<input type="checkbox"/> ARTIFICIAL [0]	_____
<input type="checkbox"/> BEDROCK [5]	_____		

ORIGIN

QUALITY

☐ LIMESTONE [1]☐ HEAVY [-2]☒ TILLS [1]☒ MODERATE [-1]☐ WETLANDS [0]☐ NORMAL [0]☐ HARDPAN [0]☐ FREE [1]☐ SANDSTONE [0]☐ EXTENSIVE [-2]☐ RIP/RAP [0]☒ MODERATE [-1]☐ LACUSTURINE [0]☐ NORMAL [0]☐ SHALE [-1]☐ NONE [1]☐ COAL FINES [-2]NUMBER OF BEST TYPES: ☐ 4 or more [2] sludge from point-sources☒ 3 or less [0]

Comments

Substrate  
14  
Maximum  
202) **INSTREAM COVER** Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 &amp; average)

1 UNDERCUT BANKS [1]

0 POOLS &gt; 70cm [2]

0 OXBOWS, BACKWATERS [1]

☐ EXTENSIVE >75% [11]

1 OVERHANGING VEGETATION [1]

1 ROOTWADS [1]

0 AQUATIC MACROPHYTES [1]

☐ MODERATE 25-75% [7]

0 SHALLOWS (IN SLOW WATER) [1]

0 BOULDERS [1]

0 LOGS OR WOODY DEBRIS [1]

☒ SPARSE 5-<25% [3]

1 ROOTMATS [1]

☐ NEARLY ABSENT <5% [1]

Comments

Cover  
Maximum  
20  
73) **CHANNEL MORPHOLOGY** Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]
<input type="checkbox"/> MODERATE [3]	<input type="checkbox"/> GOOD [5]	<input type="checkbox"/> RECOVERED [4]	<input checked="" type="checkbox"/> MODERATE [2]
<input checked="" type="checkbox"/> LOW [2]	<input type="checkbox"/> FAIR [3]	<input checked="" type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input checked="" type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]	

Comments

Channel  
Maximum  
20  
84) **BANK EROSION AND RIPARIAN ZONE** Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION	RIPARIAN WIDTH	FLOOD PLAIN QUALITY	CONSERVATION TILLAGE
<input type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input checked="" type="checkbox"/> FOREST, SWAMP [3]	<input type="checkbox"/> CONSERVATION TILLAGE [1]
<input checked="" type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input checked="" type="checkbox"/> URBAN OR INDUSTRIAL [0]
<input type="checkbox"/> HEAVY / SEVERE [1]	<input checked="" type="checkbox"/> NARROW 5-10m [2]	<input checked="" type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	<input type="checkbox"/> MINING / CONSTRUCTION [0]
	<input checked="" type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]	
	<input checked="" type="checkbox"/> NONE [0]	<input type="checkbox"/> OPEN PASTURE, ROWCROP [0]	

Comments

Indicate predominant land use(s)  
past 100m riparian.Riparian  
Maximum  
10  
3.255) **POOL / GLIDE AND RIFFLE / RUN QUALITY**

MAXIMUM DEPTH

CHANNEL WIDTH

CURRENT VELOCITY

Check ONE (ONLY!)

Check ONE (Or 2 &amp; average)

Check ALL that apply

☐ > 1m [6]  
☐ 0.7-<1m [4]  
☐ 0.4-<0.7m [2]  
☒ 0.2-<0.4m [1]  
☐ < 0.2m [0]

☐ POOL WIDTH > RIFFLE WIDTH [2]  
☐ POOL WIDTH = RIFFLE WIDTH [1]  
☒ POOL WIDTH < RIFFLE WIDTH [0]

☐ TORRENTIAL [-1] ☐ SLOW [1]  
☐ VERY FAST [1] ☐ INTERSTITIAL [-1]  
☒ FAST [1] ☐ INTERMITTENT [-2]  
☒ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential  
 Primary Contact  
 Secondary Contact  
 (circle one and comment on back)

Comments

Pool /  
Current  
Maximum  
12  
3

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 &amp; average).

☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input type="checkbox"/> BEST AREAS 5-10cm [1]	<input checked="" type="checkbox"/> MAXIMUM < 50cm [1]	<input checked="" type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input type="checkbox"/> LOW [1]
<input checked="" type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input checked="" type="checkbox"/> MODERATE [0]
			<input type="checkbox"/> EXTENSIVE [-1]

Comments

Riffle /  
Run  
Maximum  
8  
26) **GRADIENT** (ft/mi) ☒ VERY LOW - LOW [2-4]  
DRAINAGE AREA (1.39 mi<sup>2</sup>) ☐ MODERATE [6-10]  
☐ HIGH - VERY HIGH [10-6]%POOL: 0 %GLIDE: 0  
%RUN: 75 %RIFFLE: 25Gradient  
Maximum  
10  
3



# A) SAMPLED REACH

Check ALL that apply

## METHOD

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

## STAGE

- 1st - sample pass - 2nd  
☐ HIGH ☐  
☐ UP ☐  
☒ NORMAL ☒  
☐ LOW ☐  
☐ DRY ☐

## DISTANCE

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☒ OTHER

## CLARITY

- 1st -- sample pass -- 2nd  
☒ < 20 cm ☒  
☐ 20-40 cm ☐  
☐ 40-70 cm ☐  
☐ > 70 cm / CTB ☐  
☐ SECCHI DEPTH ☐

## CANOPY

- 1st pass  
☒ > 85% - OPEN  
☐ 55% - < 85%  
☐ 30% - < 55%  
☐ 10% - < 30%  
☐ < 10% - CLOSED

## C) RECREATION

- AREA DEPTH  
 POOL: ☐ > 100ft<sup>2</sup> ☐ > 3ft

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

## B) AESTHETICS

- ☐ NUISANCE ALGAE  
☐ INVASIVE MACROPHYTES  
☐ EXCESS TURBIDITY  
☐ DISCOLORATION  
☐ FOAM / SCUM  
☐ OIL SHEEN  
☐ TRASH / LITTER  
☐ NUISANCE ODOR  
☐ SLUDGE DEPOSITS  
☐ CSOs/SSOs/OUTFALLS

## D) MAINTENANCE

- PUBLIC / PRIVATE ~~BOTH~~ / NA  
 ACTIVE ~~HISTORIC~~ / BOTH / NA  
 YOUNG-SUCCESSION-OLD  
 SPRAY / SNAG / REMOVED  
 MODIFIED / DIPPED OUT / NA  
 LEVEED / ONE SIDED  
 RELOCATED / CUTOFFS  
 MOVING-BEDLOAD-STABLE  
~~ARMORED~~ / SLUMPS  
~~ISLANDS~~ / SCoured  
 IMPOUNDED / DESICCATED  
~~FLOOD CONTROL~~ / DRAINAGE

Circle some & COMMENT

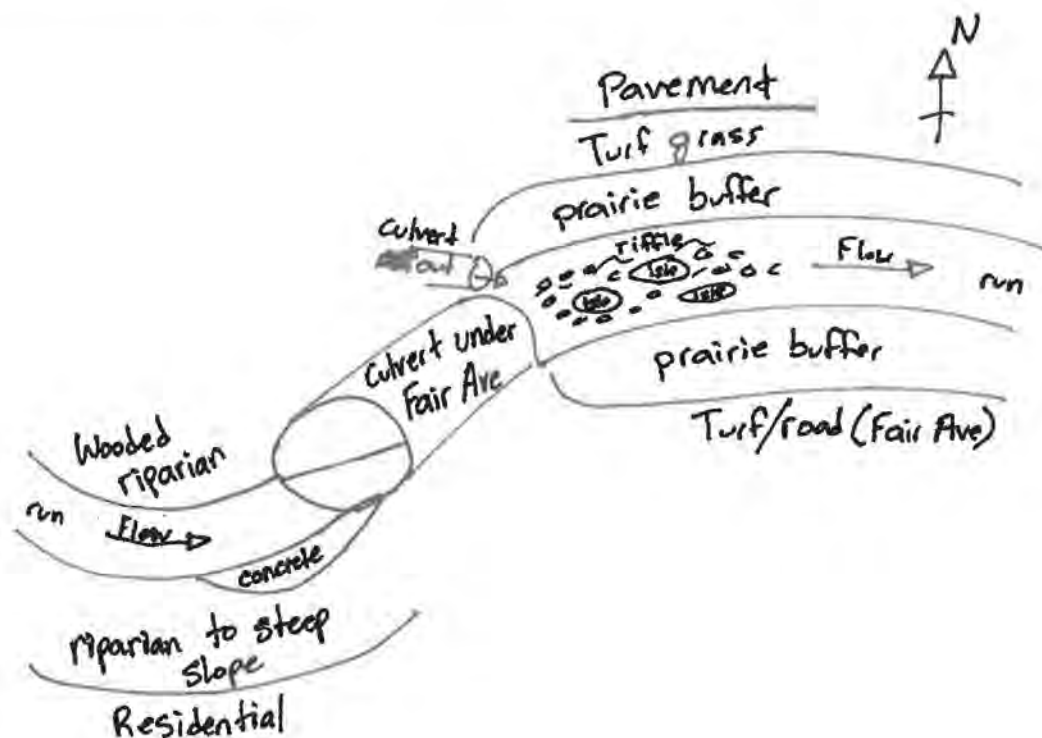
## E) ISSUES

- WWTP / CSO / NPDES / INDUSTRY  
 HARDENED ~~URBAN~~ / DIRT & GRIME  
 CONTAMINATED / LANDFILL  
 BMPs-CONSTRUCTION ~~SEDIMENT~~  
 LOGGING / IRRIGATION / COOLING  
~~BANK~~ / EROSION / SURFACE  
 FALSE BANK / MANURE / LAGOON  
 WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE  
 ACID / MINE / QUARRY / FLOW  
 NATURAL / WETLAND / STAGNANT  
 PARK / GOLF ~~LAWN~~ / HOME  
 ATMOSPHERE / DATA PAUCITY

## F) MEASUREMENTS

- $\bar{x}$  width  
 $\bar{x}$  depth  
 max. depth  
 $\bar{x}$  bankfull width  
 bankfull  $\bar{x}$  depth  
 W/D ratio  
 bankfull max. depth  
 floodprone  $x^2$  width  
 entrench. ratio  
 Legacy Tree:

## Stream Drawing:





HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION W. Lancaster - S. Baltimore - W. Millersport

SITE NUMBER ST-11-INT

RIVER BASIN

DRAINAGE AREA (mi<sup>2</sup>) 0.06

LENGTH OF STREAM REACH (ft) 100

LAT. 39.71830

LONG. -82.63740

RIVER CODE

RIVER MILE

DATE 03/28/24

SCORER

Nathan Barnes

COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL  
MODIFICATIONS:☐ NONE / NATURAL CHANNEL☐ RECOVERED☐ RECOVERING☒ RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDG SLABS [16 pts]	0%	<input checked="" type="checkbox"/> SILT [3 pt]	30%
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	0%	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	0%
<input type="checkbox"/> BEDROCK [16 pt]	0%	<input type="checkbox"/> FINE DETRITUS [3 pts]	0%
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	0%	<input checked="" type="checkbox"/> CLAY or HARDPAN [0 pt]	60%
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	0%	<input type="checkbox"/> MUCK [0 pts]	0%
<input type="checkbox"/> SAND (<2 mm) [6 pts]	10%	<input type="checkbox"/> ARTIFICIAL [3 pts]	0%

Total of Percentages of  
Bldr Slabs, Boulder, Cobble, Bedrock 0.00%

(A)

Substrate Percentage  
Check 100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

TOTAL NUMBER OF SUBSTRATE TYPES: 3

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

MAXIMUM POOL DEPTH (centimeters): 8

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS

AVERAGE BANKFULL WIDTH (meters): 0.75

HHEI  
Metric  
PointsSubstrate  
Max = 40

6

A + B

Pool Depth  
Max = 30

15

Bankfull  
Width  
Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

FLOODPLAIN QUALITY

L R (Per Bank)

☐ Wide >10m☐ Moderate 5-10m☒ Narrow <5m☐ None

L R (Most Predominant per Bank)

☐ Mature Forest, Wetland☐ Immature Forest, Shrub or Old Field☒ Residential, Park, New Field☐ Fenced Pasture

L R

☐ Conservation Tillage☐ Urban or Industrial☒ Open Pasture, Row Crop☐ Mining or Construction

COMMENTS:

- FLOW REGIME** (At Time of Evaluation) (Check ONLY one box):

☒ Stream Flowing☐ Subsurface flow with isolated pools (Interstitial)

COMMENTS

☐ Moist Channel, isolated pools, no flow (Intermittent)☐ Dry channel, no water (Ephemeral)

- SINUOSITY** (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

☐ None☒ 0.5☐ 1.0☐ 1.5☐ 2.0☐ 2.5☐ 3.0☐ >3**STREAM GRADIENT ESTIMATE**☒ Flat (0.5 ft/100 ft)☐ Flat to Moderate☐ Moderate (2 ft/100 ft)☐ Moderate to Severe☐ Severe (10 ft/100 ft)

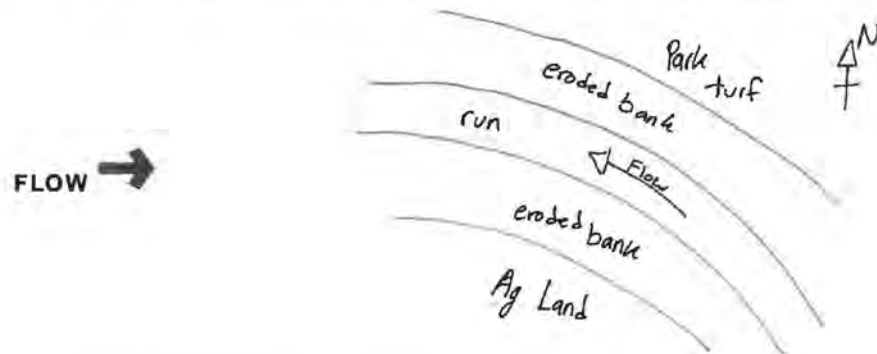


**ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score  (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

<input type="checkbox"/> WWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>

**MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION**USGS Quadrangle Name:  NRCS Soil Map Page:  NRCS Soil Map Stream Order   
County: **Fairfield** Township / City: **Lancaster****MISCELLANEOUS**Base Flow Conditions? (Y/N): ☒ Y Date of last precipitation: **03/26/24** Quantity: **0.30**Photograph Information: Elevated Turbidity? (Y/N): ☐ N Canopy (% open): **100%**Were samples collected for water chemistry? (Y/N): ☐ N (Note lab sample no. or id. and attach results) Lab Number: **N/A**Field Measures: Temp (°C)  Dissolved Oxygen (mg/l)  pH (S.U.)  Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N): ☒ Y If not, please explain: Additional comments/description of pollution impacts: **BIOTIC EVALUATION**Performed? (Y/N): ☐ N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)Fish Observed? (Y/N): ☐ N Voucher? (Y/N): ☐ N Salamanders Observed? (Y/N): ☐ N Voucher? (Y/N): ☐ N  
Frogs or Tadpoles Observed? (Y/N): ☐ N Voucher? (Y/N): ☐ N Aquatic Macroinvertebrates Observed? (Y/N): ☐ N Voucher? (Y/N): ☐ NComments Regarding Biology: **No biotic evaluation conducted****DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):**

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Stream & Location: W. Lancaster - S. Baltimore - W. Millersport

RM: Date: 3 / 28 / 24

Hunters Run

Scorers Full Name & Affiliation: V3 Companies - Nathan Barnett

River Code: STORET #: Lat./ Long.: 39 . 7020 / 82 . 6401 Office verified location ☐

1) **SUBSTRATE** Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY		
<input type="checkbox"/> BLDR /SLABS [10]	<input type="checkbox"/> POOL RIFFLE	<input type="checkbox"/> HARDPAN [4]	<input type="checkbox"/> POOL RIFFLE	<input type="checkbox"/> LIMESTONE [1]	<input type="checkbox"/> SILT	<input type="checkbox"/> HEAVY [-2]	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Substrate</b>  16  Maximum 20 </div>	
<input type="checkbox"/> BOULDER [9]		<input type="checkbox"/> DETRITUS [3]		<input checked="" type="checkbox"/> TILLS [1]		<input type="checkbox"/> MODERATE [-1]		
<input checked="" type="checkbox"/> COBBLE [8]	60	<input type="checkbox"/> MUCK [2]		<input type="checkbox"/> WETLANDS [0]		<input checked="" type="checkbox"/> NORMAL [0]		
<input checked="" type="checkbox"/> GRAVEL [7]	20	<input type="checkbox"/> SILT [2]		<input type="checkbox"/> HARDPAN [0]		<input type="checkbox"/> FREE [1]		
<input type="checkbox"/> SAND [6]	20	<input type="checkbox"/> ARTIFICIAL [0]		<input type="checkbox"/> SANDSTONE [0]		<input type="checkbox"/> EXTENSIVE [-2]		
<input type="checkbox"/> BEDROCK [5]				<input type="checkbox"/> RIP/RAP [0]		<input type="checkbox"/> MODERATE [-1]		
NUMBER OF BEST TYPES: <input type="checkbox"/> 4 or more [2] <input checked="" type="checkbox"/> 3 or less [0] <input type="checkbox"/> 2 or less [0]				(Score natural substrates; ignore sludge from point-sources)		<input type="checkbox"/> LACUSTURINE [0] <input type="checkbox"/> EMBEDDEDNESS		
Comments				<input type="checkbox"/> SHALE [-1] <input type="checkbox"/> COAL FINES [-2]		<input checked="" type="checkbox"/> NORMAL [0] <input type="checkbox"/> NONE [1]		

2) **INSTREAM COVER** Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT Check ONE (Or 2 & average)

<u>2</u> UNDERCUT BANKS [1]	<u>0</u> POOLS > 70cm [2]	<u>0</u> OXBOWS, BACKWATERS [1]	<input type="checkbox"/> EXTENSIVE >75% [11]
<u>1</u> OVERHANGING VEGETATION [1]	<u>1</u> ROOTWADS [1]	<u>0</u> AQUATIC MACROPHYTES [1]	<input type="checkbox"/> MODERATE 25-75% [7]
<u>0</u> SHALLOWS (IN SLOW WATER) [1]	<u>0</u> BOULDERS [1]	<u>0</u> LOGS OR WOODY DEBRIS [1]	<input checked="" type="checkbox"/> SPARSE 5-<25% [3]
<u>1</u> ROOTMATS [1]			<input type="checkbox"/> NEARLY ABSENT <5% [1]

Comments

Cover  
Maximum 20  
8

3) **CHANNEL MORPHOLOGY** Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]
<input type="checkbox"/> MODERATE [3]	<input type="checkbox"/> GOOD [5]	<input type="checkbox"/> RECOVERED [4]	<input checked="" type="checkbox"/> MODERATE [2]
<input checked="" type="checkbox"/> LOW [2]	<input type="checkbox"/> FAIR [3]	<input checked="" type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input checked="" type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]	

Comments

Channel  
Maximum 20  
8

4) **BANK EROSION AND RIPARIAN ZONE** Check ONE in each category for EACH BANK (Or 2 per bank & average)

EROSION		RIPARIAN WIDTH		FLOOD PLAIN QUALITY		CONSERVATION TILLAGE	
<input type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]	<input type="checkbox"/> CONSERVATION TILLAGE [1]				
<input checked="" type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input type="checkbox"/> URBAN OR INDUSTRIAL [0]				
<input type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	<input type="checkbox"/> MINING / CONSTRUCTION [0]				
	<input checked="" type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]					
	<input type="checkbox"/> NONE [0]	<input checked="" type="checkbox"/> OPEN PASTURE, ROWCROP [0]					

Comments

Indicate predominant land use(s) past 100m riparian.  
Riparian  
Maximum 10  
3

5) **POOL / GLIDE AND RIFFLE / RUN QUALITY**

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply
<input type="checkbox"/> > 1m [6]	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/> TORRENTIAL [-1]
<input type="checkbox"/> 0.7-<1m [4]	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/> SLOW [1]
<input type="checkbox"/> 0.4-<0.7m [2]	<input checked="" type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<input type="checkbox"/> VERY FAST [1]
<input checked="" type="checkbox"/> 0.2-<0.4m [1]		<input checked="" type="checkbox"/> FAST [1]
<input type="checkbox"/> < 0.2m [0]		<input checked="" type="checkbox"/> MODERATE [1]
		<input type="checkbox"/> INTERSTITIAL [-1]
		<input type="checkbox"/> INTERMITTENT [-2]
		<input type="checkbox"/> EDDIES [1]

Comments

Recreation Potential  
Primary Contact  
Secondary Contact  
(circle one and comment on back)

Pool / Current  
Maximum 12  
3

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input checked="" type="checkbox"/> BEST AREAS 5-10cm [1]	<input checked="" type="checkbox"/> MAXIMUM < 50cm [1]	<input checked="" type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input checked="" type="checkbox"/> MODERATE [0]
			<input type="checkbox"/> EXTENSIVE [-1]

Comments

Riffle / Run  
Maximum 8  
3

6) **GRADIENT** (ft/mi) ☒ VERY LOW - LOW [2-4] ☐ MODERATE [6-10] ☐ HIGH - VERY HIGH [10-6]

%POOL: 0 %GLIDE: 0  
%RUN: 60 %RIFFLE: 40

Gradient  
Maximum 10  
3



**A) SAMPLED REACH**

Check ALL that apply

**METHOD**

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

**STAGE**

1st -sample pass- 2nd

- ☐ HIGH  
☐ UP  
☒ NORMAL  
☐ LOW  
☐ DRY

**DISTANCE**

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☒ OTHER

50

meters

**CANOPY**

- ☐ > 85%- OPEN  
☒ 55%-<85%  
☐ 30%-<55%  
☐ 10%-<30%  
☐ <10%- CLOSED

**CLARITY**

1st -sample pass- 2nd

- ☐ < 20 cm  
☒ 20-<40 cm  
☐ 40-70 cm  
☐ > 70 cm/ CTB  
☐ SECCHI DEPTH

1st \_\_\_\_\_ cm

2nd \_\_\_\_\_ cm

**C) RECREATION**

AREA DEPTH

POOL: ☐ >100ft<sup>2</sup> ☐ >3ft**B) AESTHETICS**

- ☐ NUISANCE ALGAE  
☐ INVASIVE MACROPHYTES  
☐ EXCESS TURBIDITY  
☐ DISCOLORATION  
☐ FOAM / SCUM  
☐ OIL SHEEN  
☐ TRASH / LITTER  
☐ NUISANCE ODOR  
☐ SLUDGE DEPOSITS  
☐ CSOs/SSOs/OUTFALLS

**D) MAINTENANCE**

- PUBLIC ~~(PRIVATE)~~ BOTH / NA  
 ACTIVE ~~(HISTORIC)~~ BOTH / NA  
 YOUNG-SUCCESSION-OLD  
 SPRAY / SNAG / REMOVED  
 MODIFIED / DIPPED OUT / NA  
 LEVEED / ONE SIDED  
 RELOCATED / CUTOFFS  
 MOVING ~~(BEDLOAD-STABLE)~~  
 ARMoured / SLUMPS  
 ISLANDS / SCOURED  
 IMPOUNDED / DESICCATED  
 FLOOD CONTROL ~~(DRAINAGE)~~

Circle some &amp; COMMENT

**E) ISSUES**

- WWTP / CSO / NPDES / INDUSTRY  
 HARDENED / URBAN / DIRT&GRIME  
 CONTAMINATED / LANDFILL  
 BMPs-CONSTRUCTION-SEDIMENT  
 LOGGING / IRRIGATION / COOLING  
~~(BANK / EROSION)~~ SURFACE  
~~(FALSE BANK)~~ MANURE / LAGOON  
 WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE  
 ACID / MINE / QUARRY / FLOW  
 NATURAL / WETLAND / STAGNANT  
 PARK / GOLF / LAWN / HOME  
 ATMOSPHERE / DATA PAUCITY

**F) MEASUREMENTS**

- $\bar{x}$  width  
 $\bar{x}$  depth  
 max. depth  
 $\bar{x}$  bankfull width  
 bankfull  $\bar{x}$  depth  
 W/D ratio  
 bankfull max. depth  
 floodprone  $x^2$  width  
 entrench. ratio

Legacy Tree:

**Stream Drawing:**